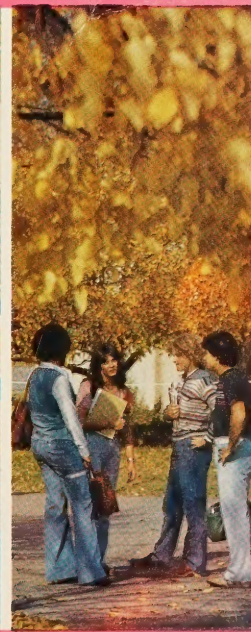
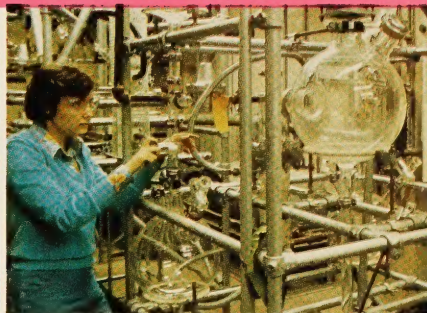




# Bröome Community College

1984 - 1985 Catalog





### ACCREDITATION

Broome Community College is a member of the Middle States Association of Colleges and Schools.

The College is supervised by the State University of New York and its curriculums are registered by the State Education Department.

The Civil, Chemical, Electrical and Mechanical Engineering Technology programs are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc., (ABET).

The Dental Hygiene program is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and by the United States Department of Education, and the Nursing curriculum is accredited by the National League for Nursing.

The Council on Medical Education of the American Medical Association (AMA) has accredited three other curriculums—Radiologic Technology, Medical Record Technology and Medical Assistant, which is also accredited by the American Association of Medical Assistants. The Medical Record Technology program has double accreditation, too, having been approved by the American Medical Record Association as well as by the AMA. The Medical Laboratory Technology curriculum is accredited by the committee on Allied Health Education and Accreditation (CAHEA) as recommended by the National Accrediting Agency for Clinical Laboratory Science (NAACLS). The Dietetic Assistant program is approved by the American Dietetic Association.

### NON-DISCRIMINATION COMMITMENT

Broome Community College, in compliance with Title VI of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972, does not discriminate on the basis of race, sex, religion, national origin, age, handicap, color, or marital status in admissions, employment and treatment of students and employees.

It is the policy and intent of the College, moreover, to comply with Section 504 of the Rehabilitation Act of 1973 as amended, which states;

"No otherwise qualified handicapped individual in the United States, as defined in section 7 (6), shall, solely by reason of his handicap be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

Questions and further information on these subjects should be directed to the College's Affirmative Action Officer or the Section 504 Coordinator.

### THE COLLEGE PHONE NUMBER IS (607) 771-5000.

The College reserves the right at any time to make changes deemed advisable or necessary. The College, moreover, shall not be responsible for any typographical or editorial errors contained in this catalog.

For information about the College, its programs, and its admissions procedure contact:

Office of Admissions  
Broome Community College  
P.O. Box 1017  
Binghamton, New York 13902  
Phone (607) 771-5001





# Broome Community College

Binghamton, N.Y. 13902

## 1984 - 1985 Catalog

A Comprehensive Community College  
Supervised by the  
State University of New York and  
Sponsored by the County of Broome



Orientation Picnic on Campus



## 47 COLLEGE PROGRAMS OF STUDY

### DEGREE-GRANTING CURRICULUMS IN 30 FIELDS OF STUDY

#### Business and Office Technologies

- 1-Accounting
- \* 2-Business Administration
- 3-Marketing Management and Sales
- 4-Executive Secretary
- 5-Word Processing
- 6-Office Services Assistant

#### Technology, Engineering and Computing

- 7-Chemical Engineering Technology
- 8-Civil Engineering Technology
- 9-Electrical Engineering Technology
- 10-Mechanical Engineering Technology
- 11-Industrial Technology
- \* 12-Engineering Science
- \* 13-Computer Science
- 14-Data Processing
- 15-Computer Technology
- 16-Tool and Die Making  
(No new day students being accepted)
- 17-Automotive Service Specialist  
(New students being accepted only  
in the evening program)

#### Health Sciences

- 18-Dental Hygiene
- 19-Medical Assistant
- 20-Medical Laboratory Technology
- 21-Medical Record Technology
- 22-Nursing
- 23-Radiologic Technology

#### Liberal and General Studies

- \* 24-Liberal Arts (Associate in Arts and  
Associate in Science degrees)
- 25-Child Care
- 26-Criminal Justice-Police
- 27-Fire Protection Technology
- 28-Individual Studies
- 29-Industrial Safety and Occupational  
Hygiene
- 30-Paralegal Assistant

Unless otherwise indicated, degree programs are occupational in nature and designed to prepare graduates for immediate employment.

\* These programs are designed to prepare graduates for transfer to four-year colleges and universities in the third, or junior, year.

### CERTIFICATE PROGRAMS IN 17 FIELDS OR STUDY

These programs generally consist of half the number of credits in an associate degree curriculum and are, therefore, the equivalent of one year of college study. Most are given in the evening.

#### Business with emphasis in:

- 1-Accounting
- 2-Management
- 3-Marketing—Sales and Retailing

#### 4-Child Care

#### 5-Criminal Justice

#### 6-Dietetic Assistant

#### 7-Fire Protection Technology

#### 8-General Office

#### Industrial Technology with emphasis in:

- 9-Chemical
- 10-Electrical
- 11-Industrial Safety and  
Occupational Hygiene
- 12-Mechanical
- 13-Production Management

#### 14-Interior Design

#### 15-Liberal Arts

#### 16-Machinist Related Instruction

#### 17-Paralegal Assistant



# HOW TO USE THIS CATALOG

To help readers find their way through the pages of this catalog, a few words of explanation may be helpful. The catalog is assembled in essentially five parts, as follows:

**PART 1**, which consists of pages 1 to 33, contains the policies, procedures and regulations of the College. And as the accompanying table of contents shows, these are divided into such areas as admissions, financial aid, expenses, academic affairs and student affairs.

**PART 2**, which runs from pages 34 to 61, is a rundown of the College's programs and curriculums, arranged in alphabetical order. It shows the courses taken by students in each semester, along with the number of class hours, laboratory hours and credits for each. A summary of the field for which each curriculum prepares its graduates is also included.

**PART 3**, from pages 62 to 71, is directed to part-time students. It has

important academic information for them including a presentation of the programs of study for them for degrees and certificates. It also includes information about the College's Center for Community Education and its non-credit offerings (Page 71).

**PART 4**, covering pages 72 to 117, carries the descriptions of the college's courses. These are arranged in alphabetical order, according to subject matter, starting with Accounting and other business courses.

**PART 5**, which appears on pages 118 to 136, is essentially the listing of the administration and faculty of the College. There is also information about the State University of New York, of which the College is a part.

Attention is also directed to the **INDEX** on pages 132 to 135. This is an alphabetical listing of the topics covered in the catalog together with the page numbers where one can find them.

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# COLLEGE MISSION AND GOALS STATEMENTS

Broome Community College is a public, comprehensive, two-year institution providing the following range of educational services to its students:

1. Arts and Science transfer degrees;
2. Occupational degree and certificate programs in allied health, business and engineering technology;
3. Developmental learning program;
4. Student and administrative services;
- and 5. Continuing education and community service activities and programs.

As an open enrollment institution, Broome Community College provides a quality, low-cost, geographically convenient program to the varied student populations in its service region.

## GOALS

- 1. Opportunity**—Given Broome Community College's mission to provide access for Broome County's recent high school graduates and veterans as well as many adults who are seeking a college education, either full- or part-time, the College offers a Full Opportunity admissions process.

- 2. Diversity**—Given the comprehensive mission of the College, diverse academic and student development services are provided to a wide range of individuals.

- 3. Community**—Given the emphasis to improve economic development and quality of life in the region, the College, in addition to its credit course offerings, has a commitment to provide business, industries and agencies with a variety of public service education and training programs.

- 4. Quality**—Given the premise that the College program requires constant and thorough scrutiny by faculty and administration, evaluation processes are utilized, internally and externally, to preserve and improve upon their excellence.

- 5. Governance**—Given numerous internal and external governance processes or agencies which impact upon the College, input from these sources is ap-

propriately utilized to formally and informally affect the College's mission and operations.

- 6. Resources**—Given the need to sustain as well as improve the College's program and also keep pace with the accelerating knowledge explosion in education, it becomes increasingly important to provide for necessary levels of physical, fiscal and human resources to obtain these results.

## AUTHORIZATION

Broome County is the sponsor of Broome Community College, which was established in 1946 and is one of the oldest community colleges in the State University of New York (SUNY) system. The College is governed by a Board of Trustees and funded by annual appropriations (operational and capital) from state and county funds, and students pay up to one-third of the college's operating costs through tuition. Five of the trustees are appointed by the County Executive, with approval of the County Legislature, and four by the Governor. County and trustee governance policy and practice are based on a mutually determined modified "Plan C" resolution of County Government.

The College President is appointed by the College Board of Trustees, with approval of the Chancellor of the State University of New York and the SUNY Board of Trustees. His/her direct supervisor is the chairman of the College Board of Trustees. The SUNY Chancellor provides an umbrella type of leadership to the president through a deputy for community colleges to insure that appropriate SUNY policies and regulations and State Education Department (SED) guidelines for post-secondary institutions are followed.

Degree granting authority for Broome Community College is given by the Board of Regents of the University of the State of New York, and the College's academic program is accredited by the Middle States Association of Colleges and Schools.

## DEFINITION

Since the date of charter in 1946, as the New York State Institute of Applied Arts and Sciences at Binghamton, the College has moved from a limited access technical institute to a comprehensive community college with a Full Opportunity enrollment policy. Broome Community College is organized into three primary divisions: academic, administrative, and student services, each of which is administered by a Vice President reporting to the College President.

The Board of Trustees establishes College policy, and the Administration interprets and implements it, working in conjunction with the Sponsor, State University of New York (SUNY), the State Education Department (SED), and the various accrediting bodies that evaluate and make recommendations on the objectives and outcomes of the college program.

Broome Community College emphasizes classroom and applied laboratory educational activities rather than being a research institution. By developing a quality program and excellence in teaching, the College provides diversified educational opportunities to individuals of varied ages. A particularly attractive feature of the College is that it draws most students from the geographic region known as Broome County. It provides an important link with the communities of Broome County and the surrounding regions in the Southern Tier of New York State, making social, economic and cultural contributions to recipients of these services.

The College provides students with a broad spectrum of both humanistic and scientific/technological related competences through its 30 degree programs and its 17 certificate programs. The College is approved by the New York State Board of Regents to offer Associate in Arts (AA), Associate in Science (AS), Associate in Applied Science (AAS), and Associate in Occupational Studies (AOS) degrees.

Enrollment includes both full- and part-time students attending day and/or evening classes. Classes run from 8 a.m. to 10 p.m. weekdays, and there is a number of weekend classes.



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# Admissions

## ADMISSIONS PROCEDURES

Students are selected as they apply, complete the admissions process, and are found suitably qualified for a particular program. The following items are required by the Admissions Office before a decision can be made on a student's application:

1. Application for admission.
2. A non-refundable \$10 application fee. (If the applicant is reapplying, seeking admittance into a part-time Early Admissions program, or is a qualified Educational Opportunity Program (EOP) applicant, then this fee does not have to be paid).
3. Official transcript(s) of all high school and any previous college work as of the date of application.

Here are a few items to note concerning the application process:

1. Students interested in any Health Science curriculum—full-time or part-time—must apply through the Admissions Office. Students who wish to enroll full-time in any of the College's other programs must also apply through the Admissions Office. Students interested in part-time study should contact the Office of Academic Advisement in Room 111 of Wales Building in other than Health Science programs.
2. American College Testing (ACT) or Scholastic Aptitude Test (SAT) score reports are not required, but if either or both are available they should be forwarded to the Admissions Office.
3. Recommendations from high school personnel are helpful, if available.
4. An interview with an Admissions Counselor at Broome Community College is desirable.
5. The postmark date of an application is an important

part of the admissions criteria and helps the College implement its first-come, first-served equal opportunity policy.

6. Most programs require that prerequisite courses are successfully completed by June 30 of the summer preceding fall enrollment.

Applicants should recognize that it is their responsibility, not a counselor's or admissions officer's, to complete the necessary forms for admission and to see that all required transcripts and/or other information are received and recognized by the Admissions Office counselors. Completing the application process is the first step toward matriculation, which also includes being accepted into a curriculum and enrolling in coursework.

Acceptance into Broome Community College only applies to the particular semester designated in the acceptance letter. If one does not attend then and wishes to enroll in a future semester, then he/she must reapply. Records are kept on file for three years, so the reapplication process usually involves merely filling out another application form, unless additional college coursework has been completed.

More information or answers to questions are available at the

Admissions Office  
Broome Community College  
P.O. Box 1017, Binghamton, NY 13902  
Phone: (607) 771-5001



## SPECIAL ADMISSIONS PROGRAMS

**Early Admissions** is a program for high achieving students who are in high school and can benefit from taking college-level courses, full or part-time, before graduating from high school. While high school seniors are usually enrolled in this program, qualified juniors and sophomores may also be eligible.

Anyone interested in part-time Early Admissions should contact the Admissions Office or his/her high school counselor for the special application form. Full-time applicants should use the regular new student application.

**Educational Opportunity Program (EOP)** is designed for students who are educationally and economically disadvantaged. It provides additional economic aid and remedial or developmental academic help. For more information, contact the Admissions office at BCC (Room 102 in the Wales Administration Building).

**International Students (from other nations).** Broome Community College is authorized under Federal Law to enroll non-immigrant alien students. For information, see page 26.

**Non-High School Diploma** applicants may qualify for a high school diploma by successfully completing 24 credit hours of course work at BCC or any college in a degree or certificate program. Students currently in high school or those having been out of high school less than one year typically cannot qualify for this program. Additional information is available at the Admissions Office.

**Transfer Credit** for students who have taken or are taking college level course work is subject to the approval of the chairperson of the student's academic department at BCC. Grades earned will not be entered into the cumulative grade-point average at Broome Community College. Students must in all cases submit to the College Admissions Office official transcripts of all college level work taken and/or being taken at another college before formal acceptance will be granted.

Students transferring courses to BCC will be required to complete in credit hours the equivalent of a semester's course of study at BCC for graduation. The determination of this minimum will be the responsibility of the department faculty sponsoring the curriculum, but in no case will the requirement be less than 12 semester credits.

## FULL OPPORTUNITY PROGRAM

Broome Community College has a Full Opportunity Program, which is designed to give every individual a chance to fulfill his/her own personal goals and potential. This means that everyone who is a previous June graduate of a Broome County high school or a veteran from Broome County with a high school diploma is given priority for admission until March 1 and is guaranteed admission into the College, but not necessarily assured of space in the program of his/her choice. To be admitted into any program of study, all applicants must meet the academic requirements of that program. When an individual does not have the required academic background for a particular curriculum, he/she will be accepted into a program or selection of courses for which he/she is qualified if space is available. Some students may require more than two years to complete a program of study.

Admission to the College shall not be denied on the basis of age, disability, ethnic origin, nationality, political belief or affiliation, race, religion or sex.

## A TTD/TTY TELEPHONE

A TTD/TTY telephone unit is available in the Admissions Office to make it accessible for the hearing impaired. The number is 771-5001. The College also has one in the Counseling and Student Development Center — 771-5021.

## TUITION DEPOSIT POLICY

Students admitted to the College prior to August 1 will be billed for a \$50 tuition deposit. This payment will be applied toward the Fall Semester tuition bill for those students who register. Students who do not register for the Fall Semester can obtain a refund of the tuition deposit, through the end of the first week of classes, by submitting a request in writing to the College Controller. At the end of the first week of classes, the tuition deposit is non-refundable.

## HEALTH REQUIREMENTS FOR HEALTH PROGRAMS

A student's enrollment in one of the Health Science programs listed below is conditional upon passing a physical examination and obtaining appropriate immunizations when required. Students should contact the department chairpersons for specific information.

Medical Assistant  
Nursing  
Medical Laboratory Technology  
Medical Record Technology  
Radiologic Technology

## IN CHART ON NEXT PAGE...

### ALL GRADES ARE FINAL CLASS AVERAGES AND NOT REGENT EXAM GRADES

\* BCC has a developmental program that enables students lacking the proper academic preparation for degree-granting curriculums to enroll in appropriate credit and non-credit courses that will qualify them. They can take these courses at BCC or elsewhere during the summer preceding their enrollment. The College reserves the right, however, to consider for admission only those applicants who have completed all prerequisites by June 30. Applicants who elect to take these courses during the spring and fall semesters would need three years to complete the curriculum.

† In these programs, Broome Community College gives priority for admissions to Broome County residents who will graduate from high school this academic year or are service veterans. . . . Students interested in a degree in the Health Science or Computer Studies curriculums who enter the College in another program are cautioned that there is no guarantee that a petition to transfer will be approved. They should discuss the possibilities with the appropriate department chairperson.



# ACADEMIC PREPARATION FOR ADMISSIONS

Curriculum	REQUIRED High School subjects	RECOMMENDED High School subjects
Business Accounting Marketing Bus. Admin.	Effective 1985-86 — Algebra for Accounting Banking, Marketing Management 1 Unit of Math for Marketing Sales Intermediate Algebra and Trigonometry (Math 11) for Business Administration	2 units Mathematics 2 units Science College preparatory courses
*Chemical Engineering Technology	Regents Chemistry (Min. grade 74) Regents Algebra Regents Geometry Regents Intermediate Algebra and Trigonometry	Additional Regents Math, Science and Chemistry courses Physics
*Civil Engineering Technology	Regents Algebra (Min. grade 74) Regents Physics (Min. grade 65) or Gen. Physics (Min. grade 74) Regents Geometry Regents Intermediate Algebra and Trigonometry	Additional Mathematics Technical courses
†Computer Science	Regents Algebra Regents Geometry Regents Intermediate Algebra and Trigonometry Precalculus Math or Regents Advanced Algebra Min. grade 74, all courses	Additional Mathematics Science, Technical courses Computer Programming
†Computer Technology	Regents Algebra Regents Geometry Regents Intermediate Algebra and Trigonometry (Min. grade 74, all courses)	Additional Mathematics Physics Computer Programming Typewriting
†Data Processing	Regents Algebra Regents Geometry Intermediate Algebra or Regents Int. Alg. and Trig. (Min. grade 74, all courses)	Additional Mathematics Computer Programming Typewriting
†Dental Hygiene	Regents Algebra Regents Geometry Biology (Regents or General) Chem. (Regents or General) —Average grade of 80 required in these courses	Typewriting Science courses (Biology, Physics)
*Electrical Engineering Technology	Regents Algebra (Min. grade 74) Regents Geometry Regents Intermediate Algebra and Trigonometry Regents Physics (Min. grade 65) or Gen. Phys. (Min. grade 74)	Additional Mathematics Technical courses

Curriculum	REQUIRED High School subjects	RECOMMENDED High School subjects
*†Engineering Science	Regents Algebra Regents Geometry Regents Intermediate Algebra and Trigonometry Precalculus Math or Regents Advanced Algebra —Min. grade 80, above courses Chem. (Regents or General) (Min. grade 74) Regents Physics (Min. grade 80) or Gen. Phys. (Min. grade 90)	Additional Mathematics Science courses Technical courses Computer Programming
Liberal Arts and Sciences	(Students should review degree/emphasis models on pages 50 and 51. These might help in selecting HS preparatory courses).	3 units Mathematics 2 units Science 3 units Foreign Language 3 units Social Studies
*Mechanical Engineering Technology	Regents Algebra (Min. grade 74) Regents Geometry Regents Intermediate Algebra and Trigonometry Regents Physics (Min. grade 65) or Gen. Phys. (Min. grade 74)	Additional Mathematics Technical courses
†Medical Assistant	Regents Algebra Biology (Regents or General) Chem. (Regents or General)	Additional Mathematics Science courses Typewriting
†Medical Laboratory Technology	Regents Algebra Regents Geometry Biology (Regents or General) Chem. (Regents or General)	Additional Mathematics Science courses
†Medical Record Technology	Regents Algebra Biology (Regents or General)	Additional Mathematics, Science, Chemistry, Typewriting
†Nursing	Regents Algebra Biology (Regents or General) Chem. (Regents or General) —Min. grade 74, above courses	College preparatory courses
†Radiologic Technology	Regents Algebra Regents Geometry Biology (Regents or General) —Min. grade 74 for Biology Another Science course	Additional Mathematics Typewriting Physics (Regents or General) Chemistry (Regents or General)
Secretarial Executive Office Services	If the student does not have Algebra, electives are limited	2 units Typewriting, 2 Science 1 unit Communications or Business English 1 unit Math (not including General or Business Math... Algebra preferred.
Word Processing	Algebra (effective Fall 1985)	2 units Typewriting 1 unit Communications or Business English 2 units Science



Considerable financial aid is available to students of Broome Community College, and the College maintains a Student Financial Aid Office to help students. Information and applications for financial aid are sent to students who are seeking full-time enrollment when they apply for admission. Any part-time student planning to take 6 credit hours or more may qualify for financial aid by formally applying and being accepted into a degree or certificate program. Part-time students may receive information/applications by contacting the Student Financial Aid Office.

Financial aid at BCC falls into three broad categories—grants that do not have to be repaid, loans on which interest rates are usually low and that have to be repaid after graduation or leaving college, and part-time employment called Work-Study. Assistance usually comes from a combination of these resources commonly referred to as a “financial aid package.”

## STUDENT AND FAMILY RESOURCES

A student's financial need is a term used to describe the funds required by a student to pay for his/her college education in excess of the amount that he/she and parents can afford to pay. Financial need is determined by using a standardized formula, which defines the “initial” or “demonstrated” need. The formula:

Take the “total educational costs” and subtract the “parental contribution and student's summer earnings.” This amount is the initial or demonstrated need.

The Financial Aid Office at Broome Community College operates on the premise that all parents and students have a responsibility to contribute as much as they can toward the cost of the student's education. This contribution plays the primary role in determining the actual initial need.

To qualify for financial aid, a student must be enrolled in a degree program of the College and be taking 6 credit hours or more, in addition to having an initial or demonstrated need. This need can be met in a number of different ways—a combination of grants, loans and work-study funds in varying amounts of each. This combination is put together by the financial aid administrator and is called a “financial aid package.”

Many students would be unable to attend college without financial aid. However, no matter when application for financial aid is made, disbursement of awarded money is not always made on an “as needed” basis. Therefore, every student should have sufficient resources available for living and educational expenses for several weeks into a semester.

# Financial Aid

## ESTIMATING EXPENSES

Listed below are charts showing the estimated average costs for the 1984-85 college year for student expenses, determined by whether or not the student lives at home and is dependent on his/her parents. These cover a 9-month period which is the length of the college year—September to May.

### Expense Charts

#### FOR DEPENDENT STUDENTS

	* Single Commuter (living home)	* Resident (living near campus)
† Tuition	\$ 950	\$ 950
Fees	63	63
Books	200	200
Transportation	400	500
Home Maintenance	1,100	NA
Personal Expenses	500	500
Room	NA	1,350
Board	NA	1,100
<b>Total</b>	<b>\$3,213</b>	<b>\$4,663</b>
Non-NY State Resident: (Additional tuition)	950	950
<b>Total</b>	<b>\$4,163</b>	<b>\$5,613</b>

#### FOR INDEPENDENT STUDENTS

	Single, Divorced, Widowed, Separated (no children)	Married, Head of Household one working or school (no children)	Married, Two working or school (no children)
† Tuition	\$ 950	\$ 950	\$ 950
Fees	63	63	63
Books	200	200	200
Rent	1,350	1,854	1,854
Food	1,100	1,436	1,650
Clothing		441	492
Transportation	500	600	740
Recreation & Personal	500	550	550
<b>Total</b>	<b>\$4,663</b>	<b>\$6,094</b>	<b>\$6,499</b>
Non-NY State Resident: (Additional tuition)	950	950	950
<b>Total</b>	<b>\$5,613</b>	<b>\$7,044</b>	<b>\$7,446</b>

† THE TUITION AMOUNT OF \$950 HAD NOT BEEN OFFICIALLY ADOPTED WHEN THIS CATALOG WAS BEING PREPARED. IT IS MOST LIKELY TO BE \$950, HOWEVER.

#### NOTES—

- \* 1) A commuter is a student who lives with his/her parents and commutes to school; a resident is an out-of-town student residing locally.
- 2) Allowances for additional expenses are made for students in certain academic programs. See page 12 under heading “Books, Supplies, Uniforms.”
- 3) Medical, child care, debt repayment, and miscellaneous expenses may be allowed if the student is able to document the cost.
- 4) Child care allowance—up to \$1,100 for each dependent child.
- 5) Transportation line includes auto insurance, license plates, maintenance. An additional allowance may be allowed depending on distance traveled from home to the College.

—ALL COSTS ARE SUBJECT TO CHANGE—



# HOW TO APPLY FOR FINANCIAL AID

To be considered for financial aid, students must apply each academic year.

## Federal and State Gifts

All financial aid applicants will be expected to apply for two major sources of financial aid—the Federal government's Pell Grant and the State's Tuition Assistance Program Award (TAP). Although the College provides information, applications and assistance, these funds are not generated by the College and must be applied for directly by the student to the agency. Further information regarding these and other problems is available at the Financial Aid Office (Wales Building, Room 101).

## College Administered Financial Aid

To be considered for financial aid administered by the College, parents of dependent students and self-supporting students must submit the Financial Aid Form (FAF) to the College Scholarship Service and the College Application for Financial Aid to the Financial Aid office. By filing the forms outlined above, students will be considered for the following financial aids, about which further information is available at the Financial Aid Office (Wales Building, Room 101):

### Federal

- National Direct Student Loan
- College Work Study
- Supplemental Educational Opportunity Grant

### Institutional

- BCC Foundation Grant

The college administers a number of programs which have been established by private individuals, companies, and organizations. These scholarship and grant programs have varying eligibility requirements. Students who wish to apply for these special scholarships may request an application from the Financial Aid Office.

## Priority Funding Dates

Fall Semester . . . . . April 30  
Spring Semester . . . . . December 1

Incoming students should apply for financial aid when they apply for admission. Because all college-based funds are limited, students are strongly encouraged to submit the appropriate forms at least 8 weeks before the above priority dates.

Completed applications received prior to April 30 will be given first priority. Applications received after this date will be considered as long as funds are available.

FAF should be mailed to College Scholarship Service before February 1 to be received at the College by April 30.

## Notification of Decisions

Students are generally notified of the action taken on their application shortly after April 30. Students who apply late will be notified as folders are completed. An explanation of students' rights and responsibilities is sent to all financial aid recipients at the time the award is made. Interested students may receive a copy of this information before an award is made by contacting the Financial Aid Office.

If a student's request for aid is denied, the reasons for the decision are explained. Students may request an appeal on financial aid decisions by writing a letter to the Vice-President for Student Affairs.

## Satisfactory Academic Progress for TAP & Title IV Aid

The college has adopted New York State Tuition Assistance Program (TAP) guidelines which require good academic standing for students to continue receiving financial aid. Contact the Registrar's Office in Room 206 of Wales Building for a copy of the guidelines. Federal regulations require satisfactory academic progress before students may receive Title IV aid (Pell, NDSL, Work Study, SEOG, Guaranteed Student Loan).

**Broome Community College does not defer SUMMER tuition based on a TAP Award.**

## PACKAGING POLICY

At Broome Community College the self-help concept of financial aid packaging is used. Eligible students are funded, on a need basis and a first-come, first-served order.

The Pell Grant and the New York State Tuition Assistance Program (TAP) represent the floor of the package followed by any employment, loans and grants available.

This kind of financial aid packaging ensures that any student who wishes to attend a postsecondary institution will have the opportunity to obtain the needed funding.

An example of the self-help concept:

- (1) Total Student Costs (Budget)
- (2) Subtract Resources:
  - a) Parental Contribution
  - b) Student Summer Savings (\$700 or \$900)
  - c) Students Assets
  - d) Other Resources

Initial Financial Need

- (3) Subtract:
  - a) Tuition Assistance Program (TAP) Grant or Estimate
  - b) Pell GrantUnmet Need for Campus-Based Aid
- (4) Subtract:
  - a) Educational Opportunity Program (EOP)
  - b) National Direct Student Loan (NDSL)
  - c) College Work Study
  - d) Supplemental Educational Opportunity Grant (SEOG)
  - e) BCC—Grant in Aid\$400 unmet need\*

\*Most students are able to satisfy their unmet need through the Guaranteed Student Loan Program. The amount of unmet need may vary from year to year.



## RIGHTS AND RESPONSIBILITIES OF FINANCIAL AID RECIPIENTS

Student recipients of financial aid are the beneficiaries of money made available by a variety of agencies—federal, state, institutional, and/or private. The act of accepting a financial aid award signifies that the recipient knows about, understands, and is willing to comply with both the rights and the responsibilities involved with that award. Thus, it is the recipient's **RIGHT TO KNOW**:

- 1—What federal, state and institutional financial aid programs are available.
- 2—The deadlines for submitting application forms for each assistance program.
- 3—The cost of attending the College and the refund policy.
- 4—The criteria used by the College to select financial aid recipients and how the school determines financial need.
- 5—What resources (such as parental contribution) are considered in the calculation of financial need and how much of that need, as determined by the College, has been or will be met, and how (loan, grant and/or work-study).
- 6—How much of the financial aid will have to be repaid, and what portion is a grant (gift-aid). If the aid is a loan, the recipient should know what the interest rate is, the total amount that must be repaid, the payback procedures, the length of time allowed to repay the loan and when repayment is to begin.
- 7—How the College determines whether the student-recipient is making satisfactory progress and what happens if not.



It is the recipient's **RESPONSIBILITY** to:

- 1—Know and understand fully the financial aid program and one's specific financial aid package before signing the forms.
- 2—Make sure that all application forms are completed accurately and submitted, on time, to the right place.
- 3—Pay special attention to and accurately complete the application for student financial aid. Errors can result in long delays in the receipt of financial aid. Intentional misreporting of information on application forms for federal financial aid is a violation of law and is considered a criminal offense subject to penalties under the U.S. Criminal Code.
- 4—Return any and all additional documentation, verification, correction, and/or new information requested by either the Financial Aid Office or the agency to which the application is submitted.
- 5—Read and understand all forms that one signs and keep copies of them.
- 6—Accept responsibility for all agreements signed.
- 7—Notify the lender of changes in name, address or school status, if one has a loan.
- 8—Perform the work that is agreed upon in accepting a College Work-Study award.
- 9—Know and comply with the deadlines for application and/or reapplication for aid.
- 10—Know and comply with the school's refund procedures.



## GRANTS

**NOTE** — The following financial aid information is current as of spring 1984. Due to the nature of financial aid programs, some of this information may be changed during the academic year. Please contact the Financial Aid office for updated information.

ELIGIBILITY	AMOUNT PER YEAR	WHERE/HOW TO APPLY
<b>Tuition Assistance Program (TAP)</b>		
Full-time students at any accredited college in New York State. Resident of New York State. No academic requirement.	\$300 to \$2700, not to exceed tuition. Based on income.	New York State Higher Educational Services Corp. Tower Building Empire State Plaza Albany, NY 12230 Forms available in BCC Financial Aid Office.
<b>Regents College Scholarship (Scholarships for nursing students and children of deceased or disabled veterans also available)</b>		
Based on SAT or ACT test scores. For full-time students at any accredited college in New York State who are New York State residents.	Minimum of \$250. Depending on income and class level, a TAP award may also be received that could combine with the \$250 to equal the tuition charge.	New York State Higher Educational Services Corp. Tower Building Empire State Plaza Albany, NY 12230
<b>*Pell Grant Program</b>		
Accepted or enrolled full-time or half-time students who demonstrate financial need.	From \$225 to \$1900. Cannot exceed one-half the cost of college expenses.	Forms available in BCC Financial Aid Office and in high school guidance counselor offices after Jan. 1.
<b>*Supplemental Educational Opportunity Grant</b>		
For full-time or half-time students with demonstrated high financial need. On first-come, first-served basis.	Up to \$2000 depending upon need and cost of college expenses.	Student must submit a Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office and in high school guidance offices.
<b>BCC Foundation Grant</b>		
Full-time or part-time students with financial need.	Varies according to individual need.	Submit Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office.
<b>Educational Opportunity Program</b>		
Full-time and part-time students with financial need and less than an 82 high school average. Family income must be below a specific level.	Varies according to individual need. Average of \$275 per student per academic year.	Application available in the Educational Opportunity Program Office at BCC in Library.

\*Student and parents required to submit 1983 federal income tax return to Financial Aid Office for these programs.

## LOANS

ELIGIBILITY	AMOUNT PER YEAR	WHERE/HOW TO APPLY
<b>*New York State Higher Education Services Corporation Loan</b>		
For full-time or part-time students. Student borrows on own signature from a participating bank. If family income is greater than \$30,000 a year, student must show financial need.	Maximum of \$2500 per academic year. No interest while in school. Repayment and 8% interest begin 6 months after leaving school. Up to 10 years to repay. Insurance premium of 1/4 of 1% and a 5% origination fee are deducted from borrowed amount.	Most banks in New York State or New York State Higher Education Services Corporation, 50 Wolf Road, Albany, NY 12205. Forms available at local banks.
<b>*National Direct Student Loan</b>		
For full-time or part-time students with financial need. Student borrows from the college on own signature. Awarded on a first-come, first-served basis.	Amount varies according to student's need. Total of \$6,000 for an undergraduate program, but no more than \$3,000 total for the first two years of college study. No interest while in school. Repayment at 5% interest begins 6 months after leaving school. Up to 10 years to repay.	Student must submit Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office.
<b>Parent Loan for Undergraduate Students (PLUS)</b>		
Loan program for parents of dependent undergraduate students. Maximum \$3,000 per year per student. Total loan limit of \$15,000 per student. Repayment begins 60 days after disbursement. 12% interest rate, though interest can fluctuate.		
<b>Pauline Parker Loan</b>		
For full-time students who are Broome County residents, under 25 years of age, and in financial need.	\$1000 maximum per year. No interest charge.	Forms available in BCC Financial Aid Office.
<b>Emergency Loans</b>		
For full-time or part-time students, through the support of the BCC Foundation. Available in emergency situations only.	\$150 maximum. No interest charge. Repayment in 30 days.	Forms available in BCC Financial Aid Office.
<b>EMPLOYMENT</b>		
<b>*College Work-Study</b>		
For full-time or part-time students with financial need. Awarded on a first-come, first-served basis.	Students may work up to 20 hours a week when classes are in session or up to 37 1/2 hours a week during vacations. Wage: Minimum.	Student must submit Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office.



## TUITION

Tuition and fees are payable at the Student Account Office according to a payment schedule released by the College for each semester. The responsibility for payment rests upon the student, who will be billed prior to the start of each semester. Both full-time and part-time students who have registered for courses will be "de-registered" if they fail to meet the established due dates for tuition/fee payment.

### STUDENT CARRYING 12 OR MORE CREDIT OR CREDIT-EQUIVALENT HOURS —considered full-time students.

For New York State residents

With residency certificate .....	\$475 per semester*
Without residency certificate .....	\$950 per semester*
For out-of-state residents .....	\$950 per semester*

Students admitted to the College prior to August 1 will be billed for a \$50 tuition deposit. This payment will be applied toward the Fall Semester tuition bill for those students who register. Students who do not register for the Fall Semester can obtain a refund of the tuition deposit, through the end of the first week of classes, by submitting a request in writing to the College Controller. At the end of the first week of classes, the tuition deposit is non-refundable.

### STUDENTS CARRYING FEWER THAN 12 CREDIT OR CREDIT-EQUIVALENT HOURS —considered part-time students.

For New York State residents	\$38 per credit or *
With residency certificate ... credit-equivalent hour	
Without residency certificate } \$76 per credit or *	
For out-of-state residents .....	credit-equivalent hour

**NOTE - See "credit equivalent" on page 22.**

Many students may qualify for financial aid, some of which is applicable toward tuition. **See Financial Aid section on pages 8 through 11.**

**SEE TUITION REFUND POLICY ON PAGE 13.**

\*This tuition amount had not yet been officially adopted when this catalog was being prepared. It is most likely to be this amount, however.

## RESIDENCY CERTIFICATE

To qualify for the resident tuition fee, a student is required by law to present once each academic year on or before registration a residency certificate indicating that he or she has been a legal resident of the State of New York for one year and of a county for six months.

**Broome County Residents**—Full-time students admitted to the College will be mailed a copy of the application for residency certificate prior to registration. This application must be completed and presented at the time of tuition payment.

**Out-of-County Residents**—Full-time students admitted to the College will be mailed a copy of the application for residency certificate prior to registration. The application must be completed, notarized and presented to the **County Treasurer of the County in which the student resides.** The County Treasurer will then issue a residency certificate to the student. This residency certificate must be presented at the time of tuition payment.

**Part-Time Students** must meet the same requirements as stated above. The application for residency certificate form is available at the Student Account Office and the Office of Continuing Education.

The completed residency forms are required once each academic year.

Failure to comply with this requirement will result in paying double tuition, not to exceed the limitations cited above.

## Books, Supplies, Uniforms And Other Student Expenses

Students provide at their own expense the necessary books and instructional materials. These may be purchased at the College Book Store maintained by the Faculty-Student Association for the convenience of the students. The cost varies, depending on the curriculum, from about \$200 to \$400.

In the Health Science curriculums students will provide, at their own expense, their own transportation to off-campus locations for necessary clinical and other experience.

In addition, some curriculums require uniforms. Among these are Nursing, Radiologic Technology, Medical Laboratory Technology and Medical Assistant. Gym clothes are necessary for physical education classes. Dental instruments and pants-type uniforms are prescribed for Dental Hygiene students.

The following expenses are in addition to the usual cost of about \$200 per year for books and are included in financial aid allowance for students enrolled in these programs:

	Freshman	Senior
Chemical Technology .....	\$60	\$60
Civil Technology .....	50	95
Dental Hygiene .....	300	255
Electrical Technology .....	200	75
Mechanical Technology .....	40	40
Medical Assistant .....	75	75
Medical Lab Technology .....	100	0
Nursing .....	85	50
Radiologic Technology .....	375	425
Secretarial .....	50	70

## College Fees

Application Fee .....	\$10
Late Registration .....	10
Parking Registration .....	1
Transcript Fee .....	1
Returned Check Fee .....	5
ID Fee (Per Semester) .....	1
Credit by Examination	
Non-Laboratory Course .....	25
Laboratory Course .....	Maximum 65
\$25 plus \$10 for each clock hour of lab examination (See page 15)	

Credit by Evaluation ..... \*50 plus (Portfolio Assessment)

\*In addition to the \$50 fee, there is a charge of \$5 per credit hour. This \$5 is refundable if credit is not granted. The \$60 is non-refundable, however. (See page 15).

Chemistry Laboratory Fee ..... \$5 per semester  
For all students taking chemistry laboratory courses with 200 numbers (\$5 per student).



## Student Fees

### STUDENT ACTIVITY

Full-Time Student .....	\$25 per semester
Part-Time Day Student .....	2 per semester
Part-Time Evening Student .....	1 per semester

The activity fee entitles full-time day students to admission to varsity games, dances and parties, as well as a subscription to the student newspaper and the opportunity to participate in a varied program of co-curricular activities, including intramural athletics.

The Student Activity Fee is budgeted and administered by the Student Government with the approval of the College Administration and in recent years has been apportioned to the following activities:

- Campus publications
  - Newspaper, Yearbook
- Program Board
  - Speakers, Performers, Dances, Movies, Picnics,
  - Special On and Off-Campus
- Programming
- Club Council
  - 27 funded clubs including most curriculum organizations
- Athletics
  - 13 male and female intercollegiate teams,
  - coaching stipends, intramurals, administrative expenses
- Student Government Association
  - Administrative expenses, vehicle maintenance,
  - class gift, audit, supplies

**Part-time day students** (those taking fewer than 12 credit or credit-equivalent hours) pay a \$2 student activity fee per semester. This entitles them to admission to convocations and to issues of the Fulcrum, the student newspaper. It does not include, however, admission to varsity sports events or membership in student organizations or to copies of The Citadel, the student yearbook. The student has the option though of paying \$25 per semester and receiving the same privileges as full-time day students. **Part-time evening students** pay a \$1 student activity fee per semester.

**SEE FEE REFUND POLICY IN COLUMNS 2 AND 3 ON THIS PAGE.**

## ACCIDENT INSURANCE, HEALTH SERVICE FEE

Full-Time Student Accident Insurance .....	\$7 per year
Health Service Fee	
Full-Time Students .....	\$3 per semester
Part-Time Day Students .....	\$1 per semester
(This is a compulsory fee)	

Money collected from the Health Service fee is used for physician services, drugs, supplies, educational material, diagnostic equipment, special health programs and related Health Service expenses. The fee is non-refundable if the student withdraws from the College.

The accident policy covers the student for 12 months commencing the first day of classes for expenses incurred as a result of any accident, on or off campus. Maximum coverage is \$1000 per accident. Claim forms are available in the Health Service during the year, and must be filed with the Health Service before expenses will be paid. Students who withdraw and wish a refund of their accident policy must apply directly to the insurance company.

### International Student Health Insurance

International students must show that they have health insurance coverage before they may enroll at the College. They must either purchase their own health insurance or that which is available through the College for \$87 per semester. Claim forms are available in the Health Service during the year. Students who withdraw and wish a refund of their health insurance fee must ap-

ply directly to the insurance company. Note that the "Health Insurance" mentioned in this paragraph is different from the "Health Service Fee" in the first paragraph above.

### MEDICAL INSURANCE

The College does not provide medical insurance, but it is available through a number of insurance companies including Blue Cross/Blue Shield.

### GRADUATION/CERTIFICATE FEES

Graduation .....	\$18
Certificate (part-time evening only) .....	8

Paid during semester preceding graduation and is refundable if the student does not graduate or earn certificate.

### ALUMNI LIFETIME MEMBERSHIP.....\$25

Membership in the Broome Community College Alumni Association is optional. The lifetime dues are payable during the semester preceding graduation, and they entitle graduates to complete Association benefits.

## Refund Policies, Procedures

### TUITION REFUND POLICY Fall and Spring Semesters

Students who officially withdraw from classes during the first three weeks of a semester will be entitled to tuition refunds on the following basis—100% refund during the first week, 50% during the second week and 25% during the third week. After three weeks of classes there will be no refunds. See College Calendar on page 136 for additional information on dates for tuition refunds.

**NOTE** — Participants in the New York Civil Service Employees Association Labor Education Action Program (LEAP) will be subject to the tuition refund regulations specified in the LEAP guidelines.

### Summer Session

Students who withdraw from Summer Session classes will be entitled to a 100% refund during the first week of the term. After that, there will be no refunds.

### FEE REFUND POLICY

The student activity fee is refundable according to the same schedule as tuition. See "Tuition Refund Policy" above.

### REFUND PROCEDURE

An application for refund of tuition and fees must be made in person and in writing in the Registrar's Office (W-206). The application must be on the College form provided. The date on which the application is filed is considered the official date of the student's withdrawal and any refund to which the student may be entitled is computed using that date.



# Academic Affairs

## REQUIREMENTS FOR GRADUATION

COMMON REQUIREMENTS FOR ALL FOUR DEGREES GRANTED BY THE COLLEGE

1. Successful completion of all courses for the degree as contained in this Catalog.
2. A 2.00 cumulative GRADE POINT AVERAGE in those courses applicable to the degree.
3. Recommendation of the faculty for the awarding of the degree.
4. Satisfaction of all obligations to the College.

## THE ASSOCIATE IN APPLIED SCIENCE DEGREE (AAS)

This degree is awarded to graduates of curriculums in these fields of study:

Accounting  
Automotive Service Specialist  
Chemical Engineering Technology  
Child Care  
Civil Engineering Technology  
Computer Technology  
Criminal Justice—Police  
Data Processing  
Dental Hygiene  
Electrical Engineering Technology  
Executive Secretarial  
Fire Protection Technology

Individual Studies  
Industrial Safety and Occupational Hygiene  
Industrial Technology  
Marketing Management and Sales  
Mechanical Engineering Technology  
Medical Assistant  
\*Medical Laboratory Technology  
\*Medical Record Technology  
Nursing  
Office Services Assistant  
Paralegal Assistant  
\*Radiologic Technology  
Word Processing

5. Curriculum Requirements
  - a. The minimum number of credits in a student's major field as determined by each academic department. These are courses intrinsic to and required by the various curriculums.
  - b. A minimum of 20 credits in Liberal Arts and Sciences courses will include:
    - 1) Social Sciences: a minimum of 6 credits
    - 2) Natural and Physical Sciences (including mathematics): a minimum of 6 credits
    - 3) Humanities: a minimum of 6 credits in English (may include a maximum of 3 hours in speech)
  - c. Satisfactory completion of all courses in a curriculum or as approved in a department.
  - \*d. Summer clinical experience required for graduation in curriculums noted.

## THE ASSOCIATE IN SCIENCE DEGREE (AS)

This degree is awarded to graduates of the Business Administration, Computer Science, Engineering Science and Individual Studies curriculums and the Science Option in Liberal Arts and Sciences.

5. Curriculum requirements:
  - a. At least 30 credits in the humanities, natural sciences, mathematics, the social sciences.
  - b. Physical Education—2 credits (for Liberal Arts, Computer Science and Engineering Science students only).





## THE ASSOCIATE IN ARTS DEGREE (AA)

This degree is awarded to graduates in the Liberal Arts and Sciences curriculum.

5. Liberal Arts and Sciences requirements distributed as follows:
  - a. English: a minimum of 12 credits, of which 6 shall be in composition and 6 in literature.
  - b. History: a minimum of 6 credits in approved courses.
  - c. Humanities: a minimum of 6 credits (6 in philosophy or 6 in a foreign language).
  - d. Mathematics: Students who have completed fewer than 3 units of secondary school mathematics (through 11th year math) are required to take 2 semesters of college level mathematics. . . Students who have completed 3 units of secondary school mathematics (through 11th year math) are required to take one semester of college level mathematics. . . Students who have completed more than 3 units of secondary school mathematics (including 11th year math) are not required to take additional mathematics. They may, however, elect an appropriate math course or an elective in another field.
  - e. Natural and Physical Sciences: a minimum of 8 credits.
  - f. Social Sciences: a minimum of 6 credits.
  - g. Electives: 16 credits minimum. A maximum of 12 credits may be taken outside the offerings in Liberal Arts and Sciences with the approval of the dean of the division.
  - h. Physical Education: 2 credits. Exceptions to this requirement may be made by the dean of Liberal Arts for valid reasons.
  - i. Satisfactory completion of all courses in a curriculum or as approved in a department.

## THE ASSOCIATE IN OCCUPATIONAL STUDIES DEGREE (AOS)

This degree is awarded to graduates of the Tool and Die Making curriculum and requires a minimum of 64 semester credit hours.

5. There are no specific requirements to take particular numbers of credit in general education courses for the AOS degree.

## CREDIT BY EVALUATION

### Non-Traditional Study

Broome Community College acknowledges that it is necessary and worthwhile to provide methods for considering various non-traditional activities for credit. By documenting and demonstrating that learning has taken place through various prior experiences, students may be awarded academic credit. Various examinations may also be taken for credit.

The divisional dean is the initial contact point for students interested in obtaining more information about non-traditional study, examination programs, and their suitability for various student purposes. Students will be assisted in determining whether or not such study or examinations would be worth pursuing for their educational objectives. The appropriate academic department is responsible for integrating any credit achieved in this manner into the student's academic program.

### Advanced Placement Examination (AP)

The College will recognize for credit the AP examinations of the College Entrance Examination Board. A score of 3 or above is acceptable for credit upon departmental approval. Laboratory courses may require additional lab work for full credit for a college course. Credit awarded will be handled as transfer credit.

### College Proficiency Exams (CP)

The CP exams of the University of the State of New York will be recognized for credit upon approval by the appropriate department. Credit awarded will be handled as transfer credit.

### College Level Examination Program (CLEP)

The College will recognize successful achievement at or above the 50th percentile on CLEP subject exams in accordance with SUNY and American Council of Education guidelines. Approval of credit for degree requirements or electives is determined by the appropriate department. Credit approval will be handled as transfer credit. Under certain circumstances, a department may accept general examination scores.

### BCC Credit By Examination (CBE)

The College in many instances provides for full or part-time BCC students credit by examination for knowledge gained outside the traditional classroom situation. This is strictly for use at BCC. Guidelines for this procedure are available from the College's department chairpersons. There will be a fee charged for the exam. If a student receives an F grade after normal completion of a course, no credit by examination may be given in that subject.

### Portfolio Assessment (Special Individual Assessment)

The College will evaluate for credit various types of learning acquired outside the usual classroom environment and a fee is required, based on credit hours requested. Particular criteria for awarding credit may be applied by an academic department. Approval of credit is the responsibility of the appropriate department. Students must identify what has been learned. Contact the divisional dean for additional information.

### Special Assessment of Group Sponsored Learning

The College will evaluate for credit various types of learning acquired through participation in learning experiences or training provided by businesses, industry, unions, professional societies, governmental agencies or the military. Particular criteria for awarding credit may be applied by an academic department, and approval of credit is the responsibility of the department. Contact the divisional dean for additional information.



## DEGREE PROGRAMS

Graduates of Broome Community College receive associate degrees, and the courses of study are organized into four divisions—Business and Office Technologies; Technology, Engineering and Computing; Health Sciences; Liberal and General Studies. Liberal Arts courses are included in all curriculums, as it is believed that students need more than technical competence to understand people and their daily working and personal inter-relationships.

Applicants to the College should consider carefully the type of program they wish to pursue, for the nature of the offerings makes it difficult to switch from one curriculum to another after commencing studies.

### Technology, Engineering and Computing

In the area of technical education, the College offers 11 programs. One, Engineering Science is in effect the first two years of an engineering curriculum. Students who do satisfactory work in it should experience little difficulty in transferring to engineering colleges at the third-year level.

Four others are designed to train engineering technicians in the fields of Chemical Engineering Technology, Civil Engineering Technology, Electrical Engineering Technology and Mechanical Technology Engineering. Students in these programs are prepared for employment in various types of technical work immediately after graduation, although many students are successful in transferring to four-year colleges.

The Computer Studies Department offers 3 programs—Computer Science, Computer Technology and Data Processing. The Computer Science program is designed to prepare graduates for transfer to four-year colleges, while graduates of the other two are trained for immediate employment.

Other programs in the technical field offered by the College include Industrial Technology, Tool & Die Making and Automotive Service Specialist.

### Business and Office Technologies

The Business curriculums are designed primarily to prepare graduates for immediate employment in one of five fields—Accounting, Marketing Management and Sales, Word Processing, Executive Secretarial and Office Services Assistant. In addition, there is a sixth option, Business Administration, that combines more university parallel preparation with a minimum of job-

oriented courses. This program is intended for the person who plans to continue his/her college education for a baccalaureate degree, even though he/she may want to work for a while before transferring to a four-year college.

It is possible to transfer from all programs. But because each student's transfer credits are evaluated by the four-year institution, the number of credits accepted can vary.

### Liberal and General Studies

University parallel curriculums in Arts and Sciences and in Special Career Programs of an occupational nature are included in this division. Curriculums in Arts and Sciences prepare students for transfer to four-year colleges and universities. While the aim of liberal learning is to broaden human perspective and deepen understanding through the study of philosophy, history, literature and the arts, students who identify career/professional goals early can begin to develop appropriate academic concentrations. Liberal Arts and Sciences degree programs are also offered for those seeking immediate employment. Refer to the career models on pages 50 and 51 in this catalog.

The College offers, through its Special Career Programs Department, degree opportunities in six other academic areas—Child Care, Criminal Justice, Fire Protection Technology, Individual Studies, Industrial Safety and Occupational Hygiene and Paralegal Assistant. All lead to the Associate in Applied Science degree, and Individual Studies students may earn either that degree or the Associate in Science degree, depending on their program of study. All are conducted under the Special Career Programs Department, along with a Paralegal Assistant Certificate programs.

### Health Sciences

Opportunities for men and women interested in the health sciences field are provided in six areas—Dental Hygiene, Medical Assistant, Medical Laboratory Technology, Medical Record Technology, Nursing and Radiologic Technology. Graduates are prepared to work immediately after graduation in physicians' or dentists' offices, laboratories or hospitals. Graduates of these programs are also qualified to take whatever licensing examination their professions require. The college also offers a Dietetic Assistant Certificate program for those working in the field.

## CERTIFICATE PROGRAMS

Broome Community College also has certificate programs which are less than two years in length, have more specific objectives than the associate degree offerings, and consist of about one year of college credit. Some are designed to prepare students for jobs that require specialized higher education, but not necessarily a college degree; some provide students with an opportunity to upgrade their academic backgrounds or expand their qualifications for a particular field of study; and some offer college credits and additional training to people already working in the field.

Most of the certificate offerings carry college credits, and they can lead a person into some of Broome Community College's degree-granting curriculums. They can be taken on a full-time or part-time basis, and most of them are offered in the evening although some are available through day classes. No specific high school courses are required for enrollment.

Further details, a listing of courses, and literature about most of these certificate programs are available in Room 111 of Wales Building.

### Certificate Programs

#### Business Emphases

- Accounting
- Management
- Marketing/Sales/Retailing

#### Child Care

- Criminal Justice
- Dietetic Assistant
- Fire Protection Technology
- General Office

#### Industrial Technology Emphases

- Chemical
- Electrical
- Industrial Safety and Occupational Hygiene
- Mechanical
- Production Management
- Interior Design

#### Liberal Arts

- Machinist Related Instruction
- Paralegal Assistant



# INTERNATIONAL STUDIES PROGRAMS

Broome Community College is a founding member of the College Consortium for International Studies, a group of 90 colleges spreading geographically from Canada to Florida and from California to Maryland. This consortium, during the 1983-84 academic year, offered students about 65 overseas academic programs in 27 foreign locations.

The programs range from structured, formal courses at affiliated schools and institutions abroad, to service-learning and contract-independent study courses. Students may choose from short-term programs in January and during the summer to longer term, semester and year-long programs.

## SEMESTER PROGRAMS

BCC provides formal, structured programs lasting for a semester, a year or two years, in England, Denmark, Egypt, Germany, France, Ireland, Israel, Italy, Mexico, Spain and Switzerland. Students study a full semester program (usually 15 to 18 credits) that is arranged prior to their departure at affiliated schools, institutions, colleges or universities abroad.

The subject areas range from liberal arts courses to specialized programs, such as criminal justice, languages and human services. Costs of these programs vary greatly, with the emphasis on high quality programs at public institutions. The costs approximate those at U.S. public colleges. For the 1983-84 year, the cost of a full semester in the popular program in England was about \$2500. This includes full room and board, all tuition costs, round trip air transportation, and many extras.

Many BCC students will find their academic and personal lives enriched through a cultural experience difficult to match in a conventional two-year course of study in this country. BCC maintains close communication with consortium offices in New York, London and Jerusalem to facilitate the placement of students in qualified institutions abroad.

## ADMISSION TO PROGRAMS

Admission to the College does not automatically insure admission to BCC's programs overseas; separate application must be made to the consortium. Students will be evaluated on their academic ability, motivation, maturity and potential adaptability to a foreign culture. In addition to BCC approval, interviews with personnel from affiliate consortium institutions may be required. All programs are available to students from any college or the general public. At least one-half of the participants last year were community residents who went on short-term programs on a non-credit basis.

## JANUARY & SUMMER SHORT PROGRAMS

During each academic year BCC conducts a wide variety of short-term programs in January and in the summer months. Students at BCC who have been introduced to study abroad through these short-term programs, usually two to three weeks in length, often decide to study overseas for a semester or year.

The short-term courses have grown in scope, as well as in number. During recent intersessions, courses have been in London in Theater, Real Estate, Criminal Justice Seminar, Nursing Seminar, Social Welfare Seminar, Psychology Seminar. Students were also able to study Italian Culture and Art in Italy and Tropical Field Ecology in the Virgin Islands. Costs for these programs last year started at \$789 for the London courses. A full list of the January offerings is usually available by November.

The summer programs vary in length from two weeks to two months. Recent offerings have included Music and Art in Vienna, Antiquities of Ireland, Italian Culture and Language, History and Culture of Spain and North Africa, Discover China, and Anthropology Field School in Mexico. Costs in the summer programs are somewhat higher than those in January due to higher airline costs.

During the summer, there are special month-long programs at the University of Madrid for Spanish students and the University of Caen for French students. The cost of these programs was \$1,995 each for 1984, but most students are able to qualify for scholarships under a special grant from the Spanish or French governments. A full list of courses being offered during the summer is usually available in March.

## CREDITS, TRANSCRIPTS AND TUITION

Students register at BCC and pay the appropriate tuition, which in many cases covers the instructional costs abroad. Students are monitored through consortium offices in London and Jerusalem, or through individual mentors. Upon the successful completion of the formal program or after fulfillment of the contract, students will receive a BCC transcript reflecting the grades achieved or the course equivalents or the work done through the contract, greatly facilitating transfer of credits to other American institutions.

Tuition for January courses taken abroad by full-time (spring semester) Broome Community College students may be included in their spring semester tuition costs.

All credits earned are Broome Community College credits, which allows students to use their financial aid packages for semester length programs.

Students may earn up to 18 credits per semester, leading to an associate degree. Credits for intersession/short-term programs range from one to six, depending on the time spent abroad and the instruction offered in the program.

For additional details about any of the above programs, students should contact the International Studies Program Office at Broome Community College in Titchener Hall (Phone 771-5094).

Broome Community College has direct transfer agreements with a number of four-year colleges to facilitate the acceptance of BCC graduates into the third year of study. The number of colleges with which BCC has such agreements is increasing each year. Further details are available in the Counseling and Student Development Center (Wales Building, Room 200).

## With SUNY Binghamton

### Transfer Agreement

All Broome Community College students who have graduated or who will graduate with an AA or AS degree with a grade point average of at least 3.0 will be admitted, upon application, as matriculated students in Harpur College of SUNY at Binghamton. Those students graduating with the above degrees but with a grade point average between 2.6 and 3.0 are usually admitted. Others, including those with an AAS degree, should contact the SUNY at Binghamton Office of Admissions. Admitted students will be granted junior-year standing upon presentation of 56 or more transferable credits.

### Cross-Registration

BCC students may cross-register at SUNY Binghamton for one course each semester. The courses for which they cross-register must be courses that are not available at Broome Community College. No additional tuition is necessary. Additional information is available in the Registrar's office in the Wales Building, Room 206.

### Joint Degree

The joint-degree program enables students in SUNY at Binghamton's Bachelor of Arts degree program to simultaneously earn an Associate in Applied Science degree at BCC.

Additional information on these programs is available in The Registrar's Office (Wales Building, Room 206).

## COOPERATIVE PROGRAMS WITH OTHER COLLEGES

### With College of Environmental Science and Forestry (SUNY)

#### Pre-Environmental Science and Forestry

This program is designed for those students who ultimately desire a B.S. degree in the environmental sciences and/or forestry from the SUNY College of Environmental Science and Forestry (ESF), which is an upper division/graduate center.

After the first two years of study at Broome Community College, transfers to ESF may apply to a variety of programs at Syracuse which include the **biological sciences** (botany and forest pathology, entomology, zoology, wildlife biology, silvics, pest management); **chemistry** (natural and synthetic polymers, biochemistry and natural products, environmental); **forest engineering, paper science and engineering; wood products engineering; and forestry** (resource management, forest resource science, management science, environmental education and communications, urban forestry, world forestry, applied resource management). The program in **landscape architecture** leads to a B.S. degree in environmental studies and, after one additional year, a Bachelor of Landscape Architecture degree.

Persons planning to transfer should follow the program requirements in consultation with BCC's Pre-Environmental Science and Forestry campus advisor for selection of electives which vary according to the curriculum at ESF.

Successful graduates of Broome Community College's Pre-Environmental Science and Forestry Program generally gain admission to the SUNY College of Environmental Science and Forestry with full junior class status.

Contact the Liberal Arts Office in Titchener Hall, Room 108.

### With Keystone Junior College

BCC students may also cross-register at Keystone Junior College in LaPlume, Pa. for one course each semester. The courses for which they cross-register must be ones that are not available at Broome Community College, and they can take them without paying additional tuition. Additional information is available in the Registrar's Office (Wales Building, Room 206).

### Guaranteed Transfer Program with State University of New York

Students who graduate from Broome Community College with Associate in Arts or Associate in Science degrees are guaranteed admission, at the third-year level, to a four-year college of the State University of New York. This guarantee has some limitations and details are available in the Counseling and Student Development Center (Wales Building, Room 200).

### One-Plus-One Programs

Broome Community College has One-Plus-One Programs with other two-year colleges to enable a student to attend BCC for one year and then transfer to the other college for the second year for the Associate in Applied Science degree. This program permits students to begin studying at BCC for a degree in a field not offered at this College. By taking the BCC courses that one needs for the particular degree involved, residents of Broome County can enjoy the advantages of living at home during one year of their college attendance. Students taking these One-Plus-One Programs are liberal arts students at Broome Community College because most of the courses they take at BCC are liberal arts courses.

Listed below are colleges which offer transfer opportunities for students who have completed the appropriate one year of study at Broome Community College. Check with the Liberal Arts Office for more information about these programs.

#### Delhi Agricultural and Technical College

Hotel Restaurant Technology  
General Agriculture  
Animal Husbandry-Dairy

#### Paul Smith's College

Hotel and Restaurant Program



## Two-Plus-Two Programs

In addition to the one-plus-one programs, Broome Community College also has cooperative arrangements with four-year colleges. These cooperative arrangements allow students to take the first two years of a four-year degree at Broome Community College and then complete studies for the baccalaureate degree at the particular four-year college, usually in two additional years.

Colleges listed below have cooperative arrangements with Broome Community College in the areas of study indicated. Contact the Admissions Office at Broome, the appropriate department chairperson, and/or the transfer counselor in the Counseling and Student Development Center for specific information on course requirements. In addition, many of the four-year colleges require specific grade point averages to be eligible for transfer.

### College of St. Rose

All AA, AS degrees

### Cornell University (College of Human Ecology)

Nutritional Sciences

Human Development and Family Studies

Human Service Studies/Social Work Option

Consumer Economics and Housing

Design and Environmental Analysis

### Fairleigh Dickinson University

AAS Degree in Civil, Electrical, Mechanical

Engineering Technology

### Hofstra University

Full transfer for all AA and AS in Liberal Arts, Business Administration and Engineering Science

### LeMoyne College

Any baccalaureate degree program with AA or AS in Liberal Arts and Sciences, Business Administration, Engineering Science

### Marist College

Parallel programs in Business (Marketing Management) Accounting, Engineering Technology, (Civil, Electrical, Industrial and Mechanical)

### St. John Fisher College

AA, AS degree programs, Liberal Arts and Sciences, Business Administration, Engineering Science

### Rochester Institute of Technology

AA, AS, AAS degree

### SUNY College at Brockport

Business Administration, Criminal Justice, Liberal Arts and LA Mental Health Emphasis degrees will be accepted in Brockport's Recreation and Leisure degree program

### SUNY College at Cortland

Elementary Education, Computer Science

### SUNY College at Fredonia

AA degree into Business Administration or Liberal Arts or Radio and Television. AS degree into Math, Physics.

AAS in Child Care into Early Childhood Education.

### SUNY College at Oneonta

AAS in Accounting, Marketing Management and Sales, Data Processing, and AS in Computer Science

### SUNY College at Oswego

Business Administration

### SUNY College at Plattsburgh

Any associate degree that leads to a baccalaureate program

### SUNY College at Purchase

AA, AS degree programs in Liberal Arts and Sciences

### SUNY College of Technology (Utica)

AAS in Business, Electrical and Mechanical Engineering Technology, Industrial Technology, Nursing.

AS in Computer Science, Engineering Science, Liberal Arts.

AA in Liberal Arts.

### Syracuse University

School of Management

### Trinity College

AA, AS or AAS degrees, concentrates on Liberal Arts, Sciences, Business Administration, Engineering Science

### SUNY Upstate Medical Center

Cytotechnology, Medical Technology, Physical Therapy

### Utica College of Syracuse University

AA, AS graduates in following concentrations — Liberal Arts and Sciences, Business Administration, Engineering Science

### Waynesburg College

Associate degree graduates accepted, transfer credit determined on individual basis

### Wilkes College

Accounting, Business Administration, Computer Science, Liberal Arts, Nursing

### Roger Williams College

Associate degree graduates accepted, transfer credit determined on individual basis

## Absence Due to Religious Beliefs

Section 224-a of the State Education Law reads:

1. No person shall be expelled from or be refused admission as a student to an institution of higher education for the reason that he is unable, because of his religious beliefs, to attend classes or to participate in any examination, study or work requirements on a particular day or days.

2. Any student in an institution of higher education who is unable, because of his religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or any study or work requirements.

3. It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make available to each student who is absent from school, because of his religious beliefs, an equivalent opportunity to make up any examination, study or work requirements which he may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to the said student such equivalent opportunity.

4. If classes, examinations, study or work requirements are held on Friday after 4 p.m. or on Saturday, similar or makeup classes, examinations, study or work requirements shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study or work requirements held on other days.

5. In effectuating the provisions of this section, it shall be the duty of the faculty and of the administrative officials of each institution of higher education to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any student because of his availing himself of the provisions of this section.

6. Any student, who is aggrieved by the alleged failure of any faculty or administrative officials to comply in good faith with the provisions of this section, shall be entitled to maintain an action or proceeding in the supreme court of the county in which such institution of higher education is located for the enforcement of his rights under this section.

6-a. A copy of this section shall be published by each institution of higher education in the catalog of such institution containing the listing of available courses.

7. As used in this section, the term "institution of higher education" shall mean schools under the control of the Board of Trustees of the State University of New York or of the Board of Higher Education of the City of New York or any community college.

## PROGRAM-IDENTIFYING NUMBERS

State regulations require a listing of all curriculums, together with the degrees they lead to and their HEGIS code numbers. HEGIS stands for Higher Education General Information Survey, and the HEGIS numbers for each curriculum are official federal and state designations. Enrollment in other than registered or otherwise approved programs may jeopardize a student's eligibility for certain student aid awards.

## THE CECIL C. TYRRELL LEARNING RESOURCES CENTER

The Cecil C. Tyrrell Learning Resources Center provides a wide variety of learning resources. Housed in the center are the Library, the Audio Visual Department, the Mathematics Learning Center, the Writing Center, the Reading and Study Skills Center and an Engineering Sciences and Technologies Learning Center, as well as offices and classrooms.

A staff of professional, technical and clerical specialists offers the students a broad range of services designed to meet their academic needs. Typical library services include lending of materials, information services, access to other learning resource centers, interlibrary loan service, assistance in research techniques, and instruction in the use of materials and equipment. A coin operated photocopier is also available.

The Learning Resources Center's primary function is to support and supplement the academic programs of the college and to provide a center for serious study, research and learning. Students are encouraged to use its facilities, materials, and services fully, but properly. Requests for information services and assistance are welcomed by the staff.

The facilities have a capacity of nearly 900 users. Individual carrels, lounge furniture, multiple person tables and stools, and a limited number of small group study rooms is available. Audio-visual equipment including projectors, tape and record players, micro-film reader/printers, as well as more specialized machines, are located in the center for student use. Some typewriters are also available.

The Learning Resources Center was constructed in 1967-68 and named for the College's founding president in 1972, the year he retired after 26 years in the position. The building is an attractive and modern three-story structure, with more than 40,000 square feet of space devoted to its learning facilities.

The Learning Resources Center collections offer many different types of print and nonprint materials carefully selected to meet the academic needs of students at college level. The print collections consist of nearly 70,000 books, 650 current periodicals and serials, plus over 10,000 pamphlets.

More than 3,000 audio recordings, slides, filmstrips, maps, microfilms, multimedia kits, and other types of media add several thousand more items to the collection. An extensive file of college catalogs is maintained.

Most materials including magazines may be borrowed for use outside the center, although some restrictions are placed on reference and reserve materials. The basic loan period for books is four weeks, and for magazines and audio visual materials, one week.

Some loan periods may be extended if requested before the date the materials are due back in the center and the items not in demand. Overdue fines are not charged as a rule, but the college reserves the right to do so with proper notification.

Library cards will be issued to students upon request, but are not required for borrowing materials. Proper identification is necessary, however. Failure to return borrowed materials promptly upon notice can result in withholding of grades, transcripts and other services.

Lost and damaged materials must be replaced or paid for at current replacement costs, and the borrower is responsible for all materials charged out on his/her card.

The center is open for full service during the following hours:

Fall and Spring Semesters .....	
Monday—Thursday .....	8 am to 9:30 pm
Friday .....	8 am to 5 pm
Saturday .....	12 noon to 4 pm
Sunday .....	4 pm to 9 pm

Holiday and Intersession	
Monday—Friday .....	8 am to 5 pm

Summer Session	
Monday, Tuesday, Thursday.....	8 am to 9 pm
Wednesday, Friday.....	8 am to 5 pm
(The center is closed, however, on all days that the College is officially closed).	

HEGIS	Degree	Curriculum
5001	CERT	Business Skills
5002	AAS	BUS—Accounting
5004	AS	BUS—Business Administration
5004	AAS	BUS—Marketing Management & Sales
5005	CERT	General Office
5005	AAS	BUS—Secretarial Science—Word Processing
5005	AAS	BUS—Secretarial Science—Executive
5005	AAS	BUS—Secretarial Sciences, Office Services Assistant
5012	CERT	Interior Design
5099	CERT	Paralegal Assistant
5099	AAS	Paralegal Assistant
5101	AS	Computer Science
5101	AAS	Data Processing
5101	AAS	Computer Technology
5203	AAS	Dental Hygiene
5205	AAS	Medical Laboratory Technology
5207	AAS	Radiologic Technology
5208.10	AAS	Undergraduate Nursing
5213	AAS	Medical Record Technology
5214	AAS	Medical Assistant
5305	AAS	Chemical Engineering Technology
5306	AAS	Automotive Service Specialist
5309	AAS	Civil Engineering Technology
5310	AAS	Electrical Engineering Technology
5312	CERT	Industrial Technology
5312	CERT	Industrial Technology-Industrial Safety & Occupational Hygiene
5312	CERT	Machinist Related Instruction
5312	AAS	Industrial Technology
5312	AAS	Industrial Technology-Industrial Safety & Occupational Hygiene
5312	AOS	Tool and Die Making
5315	AAS	Mechanical Engineering Technology
5404	CERT	Dietetic Assistant
5503	CERT	Child Care
5503	AAS	Child Care
5505	CERT	Criminal Justice
5505	AAS	Criminal Justice-Police
5507	CERT	Fire Protection Technology
5507	AAS	Fire Protection Technology
5609	AS	Engineering Science
5649	CERT	Liberal Arts
5649	AS	Liberal Arts and Sciences
5649	AA	Liberal Arts and Sciences
5699	AS	Individual Studies
5699	AAS	Individual Studies



Because this grading policy went into effect for the Fall Semester of 1979, grades earned by students at the College prior to that date will remain as recorded.

Honor Points Per		
Grades	Credit Hour	Explanation
A	4	Outstanding achievement of course objectives
B	3	Significant achievement
C	2	Satisfactory achievement
D	1	Minimal satisfactory achievement
F	0	Failure to meet course objectives or dropped after 10th week
S	—	Satisfactory (certain courses)
U	—	Unsatisfactory (certain courses)
W	—	Withdrawal from a course between the 4th and 10th weeks inclusive (See "W" Grade below)
I	—	Incomplete due to special circumstances (See "I" Grade next column)
IP	—	"In Progress"—for courses in which student is permitted more than one semester to complete
AU	—	Audit—not to be recorded as a grade (See "Audit" next column)
T	—	Transfer credit from an accredited college

## "S", "U" and "IP" Grades

The S or U grade and IP grade will apply only to specific courses determined by the appropriate departments and approved by the Vice-President for Academic Affairs. Such courses will not affect the Grade Point Average (GPA).

## "W" Grade

It is the student's responsibility to initiate action to receive a grade of W between the 4th and 10th weeks inclusive. If no action is taken before the 11th week and the course is dropped, an F (or U) will be entered on the transcript. For 7½ week courses, an F (or U) will be entered on the transcript if the course is dropped after the 5th week. For 5-week courses an F (or U) will be entered on the transcript if the course is dropped after the 3rd week. Students who withdraw from a class may not continue to attend that class.

## "I" Incomplete Grade

A student who receives an I grade shall, within two weeks after the last class of that semester, contact his or her instructor to arrange for completion of unfinished work, in accordance with agreed upon time limits that are not to exceed one year. The instructor will then notify the registrar of the arrangements and, after the student has completed the work, of the subsequent grade to be assigned. If the student does not meet the time limit, the instructor shall direct the registrar to record the appropriate grade.

If the student does not contact the instructor during the two-week period at the end of the semester, the registrar shall record the appropriate grade as directed by the instructor.

## Audit

The term "Audit" shall not be considered a grade but an "opportunity." For persons auditing a course, the letters AU will appear next to the course name on the transcript with a message statement explaining the meaning of the designation. No grade shall appear in the grade column on the transcript.

Students are encouraged to use the option of taking courses on an audit basis. Any student who completes a course by auditing will have AU recorded on his/her record in place of credit grades. He/she may not receive credit for it later, unless he/she re-registers in the course or challenges it according to the existing rules for credit-by-examination.

Students who register in a course for audit are expected to have the necessary prerequisites. In this respect students are encouraged to make full use of the College's counseling services, but the ultimate decision whether or not to enroll for audit shall be the student's responsibility. Consideration may be given to a student's request for transfer from credit to audit status or vice-versa. The end of the third week of classes is the deadline for such transfer.

**Full-time students** may audit courses with no additional charge, but they need approval of their department chairperson. **For part-time students**, the regular tuition schedule applies (see page 12). New York State residents who are **60 years of age or older** may audit courses without charge on a space available basis.

## Mid-Term Grades

Only the D, I, F and U grades will be reported to students and their advisers at mid-term.

## Repeating Courses

If a course is repeated, the higher grade will enter the grade point average. If a required course is failed, the department or the dean may allow the student to substitute an equivalent or similar course, rather than repeat the failed course. In such cases the higher grade will enter the grade point average.

## Grade Point Average

Each grade carries a specified number of honor points — 4 for an A, 3 for a B, 2 for a C, 1 for a D. To determine one's grade point average, multiply the number of honor points earned, according to the letter grade, by the number of credits for the course. Add these together and divide the sum by the total number of credits taken.

For purposes of graduation eligibility, only those courses required for the degree will be included in the calculation of the grade point average (GPA).

The GPA is fixed as of graduation and any courses taken after that will not change the graduation GPA and will not be entered into the previous GPA in any way. Cumulative GPA will reflect all courses that are not starred on the transcript.

## President's List and Dean's List

Full-time students who have a semester grade point average of 3.80 or better will be named to the President's List. Such students must successfully complete a minimum of 12 credit hours. Courses which use the S or U or credit equivalent grade may not be among the 12 hours.

Full-time students who have a semester grade point average between 3.50 and 3.79 inclusive will be named to the Dean's List. Such students must successfully complete a minimum of 12 credit hours. Courses which use the S or U or credit equivalent grade may not be among the 12 hours.

Part-time students can earn a place on the President's or Dean's Lists by having the appropriate cumulative grade point average for their most recent semesters that include at least 12 credit hours. Courses which use the S or U or credit equivalent grade may not be among the 12 hours. It is suggested that part-time students notify the Public Relations Office if they have the appropriate grades.

## Graduation with High Honors or Honors

Students who graduate with a cumulative grade point average of 3.80 or better will receive the distinction of graduating with "High Honors" and those who graduate with a cumulative grade point average between 3.50 and 3.79 inclusive will graduate "with Honors".

### Credit Equivalent

Some courses at Broome Community College carry "credit equivalents." This means that they do not give a student credit toward a degree at the College, but they are equivalent to the appropriate number of credits for one's academic load. This credit load is used, to cite some examples, for determining a student's status as full-time or part-time, for financial aid, for billing, and for academic standing. Four courses carry three equivalent credits for the 1984-85 college year---ENG 090 Basic Language Skills, MAT 003 Basic Mathematics Review, RDG 090 Reading Fundamentals, RDG 100 College Reading.

Credit equivalent courses will be shown on official college lists with "0" or "3" depending on whether the list is showing credits, as on a master schedule, or credit equivalents, as on a student's schedule or bill.

### Retention

The college has begun a study to determine how many of its students eventually graduate either from Broome or other colleges to which they transfer.

Early indications show that the number of students completing academic programs at Broome is steadily rising. In recent years, the graduation rate is estimated to have exceeded 50%, covering all programs. In some fields, especially the engineering technologies, the graduation rate appears to be greater, reaching as high as 65% to 75% of the entering class.

Another survey of students receiving financial aid was completed in the spring 1984 and indicates even more positive outcomes, with 65% of students graduating from all programs.

In order to be in good academic standing and to be making satisfactory progress toward a degree or certificate, a student must meet both of the following criteria:

#### ADEQUATE GRADE POINT AVERAGE (GPA) AT SPECIFIC LEVELS OF CREDIT

Interpretation: Specific grade point average criteria which students must meet at specified levels of credit to remain in good academic standing:

Credits/ Credit Equivalents Attempted	(A, B, C, D, F, I, S, W, U, IP)	Minimum Cumulative GPA Required
0-15		1.50
16-30		1.75
31 upward		2.00

#### PROGRESS TOWARD THE DEGREE

Interpretation: Students must make satisfactory progress toward their degrees. For example, full-time students need to satisfactorily complete 9 credits at the end of their second semester. Each semester thereafter, 9 additional credits must be completed. For example, by the end of the third semester, 18 credits must be completed.

#### Probation

Student's records are reviewed at the end of each semester. Students who have not achieved the minimum standards as specified above are automatically placed on probation. A student will have one semester to obtain removal from probation before facing dismissal.

During this probationary time, the student must:

- Carry a credit limit as determined by the Department Chairperson.
- Retake "F" grades as directed by Department Chairperson/Advisor.
- Follow academic contract which is outlined by the Department Chairperson with the assistance of the Advisor.

If a student is placed on probation, and in the subsequent probationary semester maintains a 2.0 grade point average, but still has less than the required minimum cumulative grade point average, probation would be continued for the next semester.

### Dismissal from the College

Students will be dismissed from the College if they do not achieve the minimum specified grade point average **and** completed credits during the probationary status.

#### DISMISSAL REVIEW PROCESS

Verified medical, psychological or personal reasons directly contributing to academic failure will be the only reasons considered by the Divisional Dean for a waiver of dismissal. Verification by a medical doctor, psychologist, certified social worker, or other appropriate college personnel, as for example Counseling and Student Development Center or Health Services.

### Readmission

To be **eligible** to be readmitted to a program as a full-time, matriculated student, the student must take no more than two courses (5-9 credits and/or credit equivalents) as a part-time, non-matriculated student in one semester and receive a "C" or above in each course. These courses must be approved by the Department Chairperson/Divisional Dean of the academic area into which the student plans to apply for readmission.

Applications for readmission are reviewed by the Department Chairperson and approved by the Divisional Dean.

- This policy also affects the receipt of the Title IV Federal Student Assistance Funds.
- The Divisional Deans' Offices are responsible for the coordination of the procedure.
- Copies of the complete policy are available in the Office of the Registrar.





## Dismissal, Readmittance for Degree Programs

A student must demonstrate discernible progress toward the achievement of a degree in a given program of study. If a student fails one or more introductory courses in a major sequence, as determined by the department, he/she may be dismissed by the department from that program of study—but not necessarily from the college.

To be considered for readmittance to the program, the student must submit an internal petition to the department, which shall determine acceptance or rejection. In the case of programs that have limited space for freshmen, the Admissions Office shall notify the student of his/her readmittance into the program and adjust accordingly the number of spaces available for new freshmen. A maximum of 10% of the total number of available spaces for freshmen in a program may be used for readmitted students.

This policy applies to the following seven programs—Dental Hygiene, Engineering Science, Medical Assistant, Medical Laboratory Technology, Medical Record Technology, Nursing, Radiologic Technology.

## Attendance Regulations

Attendance in all scheduled course activities is expected as part of each student's responsibility for his/her own education. The policy of the College is that the student's academic achievement will determine grades and not just the statistics of presence or absence.

**Student Responsibility:** Each student is responsible for any work missed regardless of reason for any absence in class.

**Instructor Responsibility:** Each instructor is responsible for relating the significance of attendance to the course's objectives and to inform the students of this significance in the first class meeting.

**Department Responsibility:** Within the spirit and framework of college policy, each department may develop its own guidelines to meet its needs. Such guidelines are subject to the approval of the vice-president for academic affairs.

## Student Academic Appeal Procedure

Broome Community College has established a procedure to provide students an opportunity to appeal grades in any particular course(s) or academic dismissal. Copies of the Student Academic Appeal procedure are available in the Office of the Divisional Dean, and the policy also appears in the Student Handbook.

## Withdrawal from the College

Broome Community College has committed itself to a philosophy of providing whatever assistance is necessary to aid the student in completing his/her academic goals. Students are strongly encouraged to seek academic and personal counseling prior to any withdrawal.

Students who decide to withdraw from the College must complete the proper termination forms available in the Registrar's Office or Counseling Center. Failure to comply may cause the individual to lose any possible refund of fees.

The College reserves the right to administratively withdraw a student from course(s) for lack of attendance. The Registrar's Office coordinates this process.

## Length of Curriculum

Most associate degree programs are designed to be completed in two years. The college year is divided into two semesters of 15 weeks each plus an evaluation week. Some students may choose or be required to take more than four semesters to earn their degrees. Radiologic Technology students, for example, have special clinical laboratory experience in the summer of both their freshman and senior years.

## Registration Policy

Registration for credit courses will be permitted only through the Friday prior to the first day of classes (each semester/summer term). To be registered is distinct from changing a student's course schedule through the drop/add process.

## Drop/Add Policy

Any student who has already registered may not add courses after the Friday of the first week of classes.

## Withholding of Grades

Students' grades will be withheld by the Registrar's Office for any semester in which there are outstanding financial or property-returning obligations. These could be to such college offices as Security, Learning Resources Center (Library), Student Accounts, Physical Education, as well as others. Students must settle any such outstanding debts to the College and then present evidence of the settlement to the Office of the Registrar, after which their grades will be distributed.

## Independent Study

Many academic departments of the College offer "Independent Study" courses which are arranged between an individual faculty member and a motivated student. The student has the responsibility to make appropriate arrangements with a faculty mentor and to secure the permission of the department chairperson before registering for independent study.

Independent Study courses are **not** intended to replace regular courses which the student was unable to schedule or which he/she did not complete. Rather, these courses provide an opportunity for the serious student who desires to expand his academic background beyond the scope and the depth usually found in a regular course. (See course description section for offerings.)

## LEARNING SKILLS CENTER

**Department Chairman, Steven Natale**  
**1st floor, Cecil C. Tyrrell**  
**Learning Resources Center**  
**Telephone 771-5038**

Students entering college may not have the appropriate preparation for the Associate Degree they seek—for example, when a person changes careers, returns to school after several years, or needs to upgrade particular academic skills.

BCC's Learning Skills Center is committed to helping students realize their goals, regardless of prior academic preparation. The Center has courses and activities available for students and works closely with the Admissions and Financial Aid Offices, The Counseling and Student Development Center and Educational Opportunity Program personnel to provide a supportive environment for learning.

### OFFICE FOR THE DISABLED

**Counselor James Gormley**  
**Counseling and Student Development Center**  
**Wales Building, Room 200**  
**Telephone 771-5210**

In addition to regular student services on campus, disabled students entering college may receive special assistance. The Office for the Disabled provides these students additional help in achieving their educational goals.

Such services as interpreters, readers and notetakers are available, and adjustments for program accessibility like rescheduling classes and elevator use are also arranged. Through the Learning Resources Center and other departmental areas, students may obtain and use various aids as the Visualtek Machine, light magnifiers, tape recorders, projectors, large print reading materials, and taped books.

Federal Law prohibits pre-admission inquiries concerning disabilities. Therefore, it is strongly recommended that students complete a brief card regarding disabilities at orientation sessions or when coming to the campus in the fall. This voluntary self-identification is confidential but will enable the College to plan for student needs and provide better service.

A TDD/TTY telephone unit is available in the Admissions Office and the Counseling and Student Development Center to make them accessible to the hearing impaired. The numbers are 771-5001 and 771-5210, respectively.

**DIAGNOSTIC TESTING** — The Learning Skills Center administers three tests to every entering full-time student—in reading, writing and mathematics. Part-time students are also encouraged to take these tests.

**COURSE PLACEMENT** — The Learning Skills Center uses the information gained from these tests to recommend to each student courses that are most appropriate to his/her program of study. Every effort is made to place students in courses in which they can succeed. Students with serious deficiencies will be required to enroll in appropriate non-credit courses.

**DEVELOPMENTAL COURSES** — Various courses are offered through the Center for those desiring skill improvement or review. Some of these carry credit; others do not. The non-credit courses listed below prepare students for credit level work in the basic skill areas of mathematics, writing and reading. These non-credit courses are equivalent in time to credit bearing classes and are applicable toward financial aid and athletic eligibility.

	Courses	Credit or Equivalent	Catalog Page
ENG 090	Basic Language Skills	0 or 3*	91
MAT 003	Basic Math Review	0 or 3*	98
RDG 090	Reading Fundamentals	0 or 3*	111
RDG 100	College Reading	0 or 3*	111

(For explanation of "credit equivalent", see page 22)

Other developmental courses are credit bearing. Students should pay close attention to catalog information pertaining to these courses and should consult their department chairpersons or Learning Skills personnel about the acceptability of credit in a particular degree program.

	Courses	Credit	Catalog
CHM 102	Preparatory Chemistry	4	77
LRS 101	Study Management	.5	111
LRS 102	Memory and Exams	.5	111
LRS 103	Textbook Mastery	.5	111
LRS 104	Listening and Note-taking	.5	111
LRS 110	The Research Paper	1	111
LRS 120	The Art of Thinking	1	112
PHY 100	Preparatory Physics I	4	108
PHY 101	Preparatory Physics II	4	108
SAC	Human Development Courses	2-3	95,96

**DROP-IN ASSISTANCE** — Learning Skills Center specialists help students with short term academic difficulties, such as writing a term paper, reading a difficult textbook, or solving a complex math problem. The staff encourage students to drop in to the Center for this type of assistance.

**TUTORING** — When a student experiences more serious academic difficulty and is in danger of failing a course, he/she may apply to the Center for peer tutorial assistance.

Located in the Cecil C. Tyrrell Library, the Center is open from 8:30 a.m. to 4 p.m. In addition, evening hours are posted each semester. Detailed brochures describing the various programs are available at the receptionist's desk in the Center.

### BOOK STORE

The College Book Store, or Campus Store as it is sometimes referred to, is located in the Student Center and actually has two areas of operation—the Textbook Department and The Campus Shop.

In the Textbook Department students may purchase their required books. To avoid standing in long lines the first week of classes, students are urged to purchase their books during the advance sale period, which is the week preceding the start of classes in both the fall and spring semester. Books are not available prior to this advance sale period. It is advisable to purchase all required textbooks early in the semester. In addition to the obvious reason of using them for studying, all unsold books must be returned to the publisher shortly after the semester begins.

The Campus Shop offers a variety of items. In addition to such classroom supplies as notebooks, paper, pens and binders, there are art and drafting materials, imprinted gift items and sportswear, and an extensive selection of paperbacks.

Students who have any special problems, suggestions or requests should feel free to contact store management.



# Counseling and Student Development Center

The Counseling and Student Development Center provides many services for students, whether they are enrolled full-time or part-time, day or evening. Students can meet with counselors in a helpful and informal atmosphere, as they seek to develop their potential, form realistic goals, and understand themselves emotionally and intellectually. The Center is equipped to help students:

1. Understand their basic needs in terms of social, vocational and emotional adjustment to the college setting.
2. Establish realistic educational goals and appropriate methods of achieving them.
3. Assess their strengths and weaknesses to enable them to more effectively deal with academic and personal problems.
4. Better understand their role and that of the College in the higher educational process.
5. Obtain information about transfer and career opportunities, as well as assistance in dealing with academic problems.
6. Grow in their personal development and determine appropriate values through instruction in human development courses.

The Counseling and Student Development Center, located on the second floor of the Wales Building is staffed by professional counselors. The Center is open from 8 a.m. to 8:30 p.m., Monday through Thursday, and 8 a.m. to 4:30 p.m. Friday during the academic year. Students should become acquainted with the Center by stopping in at their convenience or calling for an appointment. A special brochure is available at the Center, giving details about the services.

## CAREER AND LIFE PLANNING

Broome Community College offers an opportunity for students to explore interests, strengths and values in both an individual and group setting. Knowing as much as possible about oneself is the first step in understanding goals related to self fulfillment and to the world of work. The Counseling and Student Development Center can help in the process of self-evaluation and has information on career possibilities, audio-visual aids, testing procedures and techniques used in the process of exploring career fields and making career decisions. Counselors work closely with the College's Placement Center staff in offering students a comprehensive approach to career planning.

## PERSONAL COUNSELING

Counseling is available for students experiencing social, personal and family concerns. Counselors attempt to help students face their problems with an holistic approach. Assistance is given in both direct and indirect ways, by exploring, understanding and dealing with tasks and crises related to the problems being experienced. Counselors may make referrals to appropriate community agencies, if that should be necessary and mutually agreeable. All counseling is strictly confidential.

## ACADEMIC COUNSELING

Counselors are available to help students put their academic efforts into the proper perspective by analyzing their study, social and work habits to enable them to utilize their time in the most efficient way.

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## TRANSFER TO 4-YEAR COLLEGES AND UNIVERSITIES

Broome Community College has developed a fine reputation for its successful preparation of students for study at senior institutions. Students desiring to continue their education are encouraged to consult with a counselor in the Counseling and Student Development Center, their faculty advisor, or department chairperson for assistance in selecting a program and/or institution that is appropriate to their goals, abilities and aspirations.

To these ends, the College conducts the Transfer Emphasis Program, which consists of visits to the campus by representatives of four-year schools to recruit and advise potential transfer students. These visits occur each semester, and they are designed to expedite the information process necessary to insure a smooth transition between community college and various four-year programs. The representatives, generally from admissions offices, discuss life on their campuses, financial assistance possibilities and activities available, in addition to the traditional explanations of all their academic programs.

## TESTING

The Counseling and Student Development Center offers students the opportunity to engage in a testing program. When appropriate, it can be arranged for a student to take a variety of tests including personality and interest inventories. Cognitive style mapping is also available to help students better understand their individual learning preferences. The tests can help students develop self awareness and improve their decision-making ability.

## HUMAN DEVELOPMENT COURSES

Courses are offered which provide students with an opportunity to examine their values, attitudes, beliefs and abilities. The courses also offer an opportunity to learn how these factors affect the quality of relationships with others. In addition, the students examine the challenge and problems of society as they relate to their development. All courses are transferable for credit. See pages 95 and 96 for course descriptions.

Applications for the **State University of New York** colleges and university centers are available in the Counseling and Student Development Center. Students should apply directly to all **other colleges** (non-SUNY units) by requesting an application and any other pertinent data from the admissions office of the desired college.

All students should arrange at the BCC Registrar's Office to have copies of their transcripts forwarded to the admissions offices of the colleges to which they are applying. This will insure proper transfer of applicable credits. Any requests for references and recommendations may be forwarded to the Counseling and Student Development Center, and all acceptances and rejections of applications should also be reported to the Center.

Any questions or problems regarding transfer should also be directed to the Counseling and Student Development Center, which can help students determine if another college is accredited. For information on special transfer opportunities, see pages 18 and 19.

## ORIENTATION PROGRAM

Freshman, transfer or re-admitted students will have an opportunity to participate in various advising, counseling and orientation sessions as well as social and cultural activities prior to and during the semester of acceptance into the College. Information concerning these activities will be mailed to all students prior to the beginning of the semester.

The staff of the Student Affairs Office endorses the concept that a community college environment should facilitate the development of the whole student.

## SPECIAL WORKSHOPS AND SEMINARS

The Center offers a variety of workshops and seminars throughout the college year. Those that have been offered cover such topics as relaxation techniques, career exploration, cognitive style mapping, returning to college, and assertiveness training.

## PROGRAM FOR PEOPLE OVER 60

Any citizen of New York State who is 60 years of age or more may "audit" courses at Broome Community College without charge, as long as there is space available. In this connection the word "audit" means these students take the course by attending classes and being exposed to all the work given in class and assigned in the text. They do not have to do the homework or take the examinations, however, and they receive no letter grade or college credit.

## WOMEN'S PROGRAMMING

Broome Community College counselors are responsive to all students and, in particular, the women who make up more than 50% of the current student body. The women range in age from their teens to their 70's, with many of them returning to school after varying numbers of years away from the classroom.

Women can learn individually and in small groups how to begin a program, schedule it into their lives, and receive information, support and encouragement. The many counseling programs the center offers can help them achieve their academic goals, whether it be a few courses or a degree to transfer to a 4 year college or to find employment.

## TDD/TTY TELEPHONE

A TDD/TTY telephone unit is available in the Counseling and Student Development Center to make it accessible for the hearing impaired. The number is 771-5021. The College also has one in the Admissions Office — 771-5001.

## STUDENTS FROM OTHER NATIONS

The College welcomes and encourages qualified students from other countries to enroll and is authorized by the United States Department of Justice to issue necessary Certificates of Eligibility (Form I-20). For admissions information, these students should contact the Admissions Office at Broome Community College, P.O. Box 1017, Binghamton, New York 13902, U.S.A.

Most programs at the College have different admission standards. However, as a minimum for entering the College, students must:

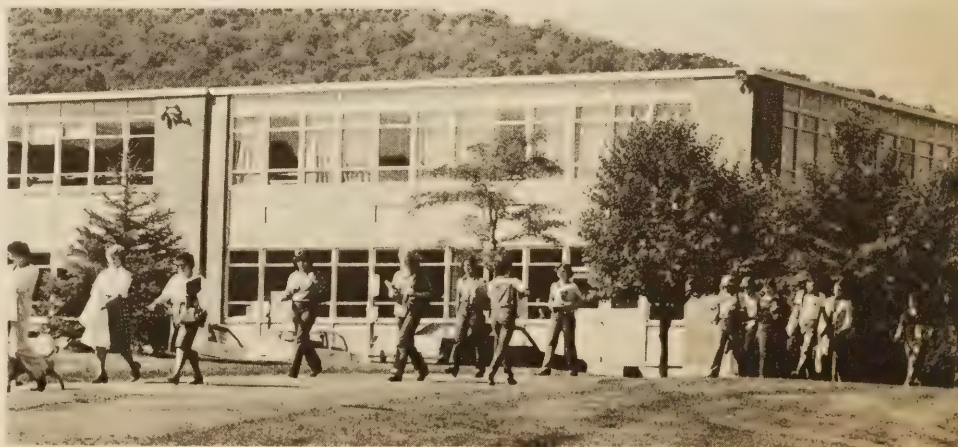
- Demonstrate proficiency of the English language by (1) submitting official TOEFL scores of 400 or better or a Michigan Test score of 65 or better **or** (2) submitting official English language translations of transcripts from all secondary schools and colleges attended in order to prove successful completion of at least 4 full years of English language instruction.
- Submit TOEFL or Michigan test scores, if either of these tests of English language proficiency have been taken. Students whose native language is not English must also take a special language pro-

ficiency exam at the College before they are allowed to register for classes.

- Provide an affidavit of financial support and a transcript in English (certified translation) of all secondary school or college work.
- Show evidence of health insurance coverage. The National Association of Foreign Student Affairs offers a health plan to meet the needs of foreign students. Information on this plan will be sent to students upon acceptance into the College.

No housing is provided for students at BCC. Some local residents list available housing with the College, and students are responsible for making their own housing arrangements. It is estimated that College costs and living expenses approximate \$6,000 per year.

The College provides an advisor to assist students from other countries in all areas of student life while at Broome Community College. Both academic and non-academic problems may be discussed with the advisor, whose office is in the Wales Building, Room 210.





Most students who attend Broome Community College will eventually enter the labor market. Getting a job, particularly that first entry level position, requires an understanding of how to contact employers and what job hunting techniques provide the best employment success. The Placement Office not only helps students locate positions but offers assistance in resumé writing and interviewing techniques.

The Placement Office lists full-time, part-time and seasonal jobs from employers who want to hire Broome Community College students and alumni. Most of these positions are related to academic programs at the College, and they are of particular value to students wishing to gain experience in their chosen field. The New York State Employment Service "Job Bank" and employment counselor are also available on a daily basis in the Placement Office (Wales Building, Room 201).

The quality of the College's academic programs is well known by many companies both locally and nationally. During the spring semester of every year, representatives of business and industry visit the campus to interview potential graduates for employment purposes. Students wishing information regarding this recruiting program should contact the Placement Office by November 1.

Individual appointments can be made to discuss job market predictions, salary expectations, and other questions related to employment.

## 90% of 1983 GRADUATES FOUND JOBS OR TRANSFERRED

● **1075 GRADUATES IN CLASS OF 1983** at Broome Community College, and 87% of them responded to survey. All statistics here are based on that 87% response.

● **90% OF THE 1983 GRADUATES** either found employment or transferred to 4-year colleges, thus enabling BCC to fulfill its two major missions of preparing graduates for immediate employment or transfer to 4-year colleges.

- 54% of the graduates went to work.
- 36% transferred to 2 and 4 year colleges or other technical programs.
- 8% were unemployed at the time of the survey.
- 2% unavailable for work.

● **STARTING SALARIES** of those who went to work averaged \$13,448 a year and ranged from \$24,000 down to \$6,700.

### ● **WHERE THEY WENT TO WORK —**

80% of those who went to work found jobs in Broome County, with an additional 9% working elsewhere in the Southern Tier. In addition, 4% got jobs elsewhere in New York State, and another 7% went outside of the state.

### ● **WHERE THEY TRANSFERRED TO —**

- 65% of those who are continuing their higher education transferred to colleges in the State University of New York (SUNY) system.
- 23% to private colleges in New York State.
- 12% to out-of-state colleges and universities.

### ● **LEADING EMPLOYERS, in order:**

Large industries in NY State, such as (in order)  
IBM, Singer-Link, Universal Instruments,  
Anitec Image Corp., Doron Precision, GE,  
Schenectady Chemical, Allied Chemical,  
Union Carbide.  
Hospitals and Nursing Homes in  
Broome County  
Retail Stores in Broome County  
Small to medium industry in Broome County

Small Businesses in Broome County  
Grocery Stores in Broome County  
New York State Civil Service  
Physicians in Broome County  
City and County Civil Service  
Restaurants and Fast Food Franchises in  
Broome County  
Accounting and Insurance Firms in  
Broome County  
Out-of-State Large Industries

### ● **COLLEGES TO WHICH BCC GRADUATES TRANSFERRED IN 1983, in order:**

SUNY Binghamton  
Clarkson College of Technology  
Rochester Institute of Technology  
SUNY Buffalo  
SUNY College at Oneonta

SUNY College at Cortland  
SUNY College at Oswego  
SUNY College at Potsdam  
SUNY at Albany  
SUNY College at Geneseo

## PLACEMENT

### THE ACADEMIC AREAS

Summary placement figures for each of Broome Community College's six academic areas. Percentages are based upon the number of graduates heard from and not the total number. Salary information is for entry level positions; those who had jobs before enrolling at BCC and kept them are not included.

**BUSINESS**—332 graduates, 56% employed, 12.5% unemployed, 28.5% transferred, 3% unavailable for work. Salary info—\$11,064 average, \$18,500 to \$7,000 range.

**COMPUTER STUDIES**—98 graduates, 41% employed, 12% unemployed, 47% transferred. Salary info—\$13,426 average, \$18,500 to \$9,360 range.

**HEALTH SCIENCES**—158 graduates, 85% employed, 5% unemployed, 6% transferred, 4% unavailable for work. Salary info—\$12,640 average, \$19,760 to \$6,700 range.

**LIBERAL ARTS**—153 graduates, 22% employed, 5% unemployed, 71% transferred, 1% unavailable for work. Salary info—\$11,800 average, \$14,000 to \$7,400 range.

**ENGINEERING AND ENGINEERING TECHNOLOGY**—271 graduates, 51% employed, 4% unemployed, 44% transferred, 1% unavailable for work. Salary info—\$16,215 average, \$24,000 to \$9,200 range.

**SPECIAL CAREER PROGRAMS**—65 graduates, 66% employed, 9% unemployed, 25% transferred. Salary info—\$12,978 average, \$18,900 to \$7,592 range.

### CURRICULUMS

Following is a summary of each curriculum of BCC's six academic areas in which there were graduates last year. Percentages are based on number of graduates reporting, no total number.

### ENGINEERING AND ENGINEERING TECHNOLOGY

**CHEMICAL ENGINEERING TECHNOLOGY**—32 graduates, 79% employed, 7% unemployed, 14% transferred. Salary info—\$15,956 average, \$20,852 to \$9,200 range.

**CIVIL ENGINEERING TECHNOLOGY**—27 graduates, 75% employed, 4% unemployed, 13% transferred, 8% unavailable for work. Salary info—\$13,414 average, \$17,070 to \$10,000 range.

**ELECTRICAL ENGINEERING TECHNOLOGY**—70 graduates, 59% employed, 41% transferred. Salary info—\$16,888 average, \$24,000 to \$12,600 range.

**ENGINEERING SCIENCE**—72 graduates, 13% employed, 8% transferred. Salary info—\$16,750 average, \$18,500 to \$14,700 range.

**INDUSTRIAL TECHNOLOGY**—21 graduates, 93% employed, 7% transferred.

**MECHANICAL ENGINEERING TECHNOLOGY**—43 graduates, 45% employed, 17% unemployed, 38% transferred. Salary info—\$16,202 average, \$22,000 to \$10,318 range.

### BUSINESS

**ACCOUNTING**—67 graduates, 51% employed, 25% unemployed, 17% transferred, 7% unavailable for work. Salary info—\$11,132 average, \$16,000 to \$9,000 range.

**BUSINESS ADMINISTRATION**—98 graduates, 38% employed, 5% unemployed, 56% transferred, 1% unavailable for work. Salary info—\$11,215 average, \$18,000 to \$7,800 range.

**MARKETING MANAGEMENT**—71 graduates, 63% employed, 7% unemployed, 28% transferred, 2% unavailable for work. Salary info—\$15,100 average, \$18,500 to \$7,000 range.

**MARKETING SALES**—27 graduates, 52% employed, 24% unemployed, 24% transferred. No salary information.

**SECRETARIAL SCIENCES (ENGINEERING)**—11 graduates, 67% employed, 16.5% unemployed, 16.5% unavailable for work. Salary info—\$12,480 average, \$15,392 to \$9,568 range.

**SECRETARIAL SCIENCES (EXECUTIVE)**—37 graduates, 84% employed, 13% unemployed, 3% transferred. Salary info—\$9,460 average, \$13,832 to \$8,000 range.

**SECRETARIAL SCIENCES (OFFICE SERVICES)**—21 graduates, 85% employed, 5% unemployed, 10% unavailable for work. Salary info—\$10,033 average, \$13,936 to \$7,800 range.

### OTHER PROGRAMS

**AUTOMOTIVE SERVICE SPECIALIST**—1 graduate, 100% employed. Salary info not available.

**TOOL & DIE MAKING**—5 graduates, 80% employed, 20% unemployed. Salary info—\$12,436 average, \$17,628 to \$9,800 range.

Student affairs at Broome Community College fall within three primary areas of responsibility—student development, student services, and student management.

**Student Development** responsibilities include counseling, international student affairs, academic advisement, testing, freshman orientation, student activities, intercollegiate athletics, drug abuse education, leadership training, career development, veterans advisement, personal development courses, transfer advisement.

**Student Services** cover admissions, financial aids, placement, health services.

**Student Management** concerns itself with student discipline, rights, responsibilities, judicial system and grievance procedures.

A comprehensive statement outlining the College's code of student conduct and student rights and responsibilities is available in the office of the Vice President for Student Affairs in Room 107 of the Wales Building. Students are welcome to examine it.

# Student Affairs

## Educational Opportunity Program (EOP)

The Educational Opportunity Program is designed for students who are economically and educationally disadvantaged. It provides economic aid and remedial and developmental assistance, with the amount of financial aid based on need. Students who do not require financial assistance under this program may benefit from the educational services offered by EOP. To be funded by EOP, students must provide appropriate income information, and all students must be New York State residents as this is a state program. The EOP Office at the College is located in the Cecil C. Tyrrell Library.

## Special Services Program

The program provides counseling services, tutorial assistance, academic advisement, diagnostic test interpretation, transfer information, referrals and other student services. Tutoring sessions are held during the day at Broome Community College and also evenings and weekends at designated locations. The Special Services counselor is located in the Cecil C. Tyrrell Library.

### COMPUTER STUDIES

**COMPUTER SCIENCE**—44 graduates, 10% employed, 5% unemployed, 85% transferred. Salary info—\$14,000 average, \$14,500 to \$13,500 range.

**DATA PROCESSING-BUSINESS**—36 graduates, 65% employed, 18% unemployed, 16% transferred. Salary info—\$12,720 average, \$16,000 to \$9,360 range.

**DATA PROCESSING-TECHNICAL**—18 graduates, 73% employed, 13% unemployed, 13% transferred. Salary info—\$14,220 average, \$18,500 to \$10,660 range.

### HEALTH SCIENCES

**DENTAL HYGIENE**—16 graduates, 94% employed, 6% unemployed. Salary info—\$13,908 average, \$17,000 to \$10,816 range.

**MEDICAL ASSISTANT**—18 graduates, 89% employed, 5.5% transferred, 5.5% unavailable for work. Salary info—\$8,303 average, \$10,920 to \$6,700 range.

**MEDICAL LABORATORY TECHNOLOGY**—11 graduates, 45% employed, 9% unemployed, 38% transferred, 8% unavailable for work. No salary info.

**MEDICAL RECORD TECHNOLOGY**—20 graduates, 95% employed, 5% transferred. Salary info—\$9,475 average, \$10,816 to \$8,500 range.

**NURSING**—78 graduates, 86% employed, 7% unemployed, 1% transferred, 6% unavailable for work. Salary info—\$14,749 average, \$19,760 to \$9,036 range.

**RADIOLOGIC TECHNOLOGY**—15 graduates, 80% employed, 7% unemployed, 13% transferred. Salary info—\$13,647 average, \$13,998 to \$13,295 range.

### LIBERAL ARTS AND SCIENCES

**ASSOCIATE IN ARTS DEGREE**—132 graduates, 23% employed, 7% unemployed, 69% transferred, 1% unavailable for work. Salary info—\$10,700 average, \$14,000 to \$7,400 range.

**ASSOCIATE IN SCIENCE DEGREE**—5 graduates, 100% transferred.

**CRIMINAL JUSTICE EMPHASIS**—3 graduates, 33% employed, 67% transferred.

**MENTAL HEALTH EMPHASIS**—19 graduates, 25% employed, 75% transferred. Salary info—\$14,000 average.

### SPECIAL CAREER PROGRAMS

**CHILD CARE**—23 graduates, 55% employed, 10% unemployed, 35% transferred. Salary info—\$7,592 average.

**CRIMINAL JUSTICE**—19 graduates, 67% employed, 13% unemployed, 20% transferred. Salary info—\$15,400 average, \$18,900 to \$11,900 range.

**FIRE PROTECTION TECHNOLOGY**—10 graduates, 100% employed. Salary info—\$16,000 average.

**INDIVIDUAL STUDIES**—7 graduates, 71% employed, 29% transferred. Salary info—\$10,500.

**INDUSTRIAL SAFETY & OCCUPATIONAL HYGIENE**—2 graduates, 50% employed, 50% transferred.

**PARALEGAL ASSISTANT**—4 graduates, 50% employed, 25% unemployed, 25% transferred.



## Health Service

The College provides a Health Service which is available to all students. Professional staff includes a full-time Nurse Practitioner, a physician available 2 mornings a week for 3 hours, and one registered nurse on duty during regularly scheduled class periods.

The Health Service provides care for injuries and minor illness, as well as health counseling and referral service to community resources. It is a resource area for relevant student problems, and it furnishes a non-threatening environment for personal problems. All records are confidential, and health data is released only with the written authorization of the student. Common procedures performed by the Health Service include blood and urine tests, throat cultures, mono tests, screening for VD, allergy and tetanus injections, pap tests by appointment, pregnancy testing, breast exams, birth control and diet counseling.

While the treatment of illness is a necessary and important aspect of the College Health Service, health promotion and health education are of equal significance. The Health Service is actively working to meet the challenge of promoting wellness by the development of the health prevention corner. This consists of health prevention films and free pamphlets on various health related matters. Health education programs are also provided throughout the year, promoting behaviors.

The Health Service is located on the first floor of the Wales Building. Cots are available for students to obtain a few quiet moments in a busy schedule.

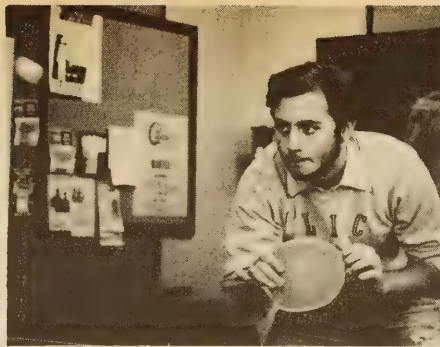
An Emergency Squad composed of students assists the Health Service to bring quick, efficient assistance in time of emergency. Students are encouraged to become active in this important function on campus.

## Living Accommodations

The College has no dormitory facility and assumes no responsibility for student housing. As a service to students, the director of the Student Activities' Office maintains an up-to-date record of housing accommodations which landlords submit as being available. This listing is neither an approval nor rating by the College, nor will the College become a third party in any arbitration between students and landlords. Housing arrangements must be made directly by students and parents with local landlords.

## Room and Board

The cost of room and board for out-of-town students is dependent upon the demands of the students. The average cost varies from \$60 to \$70 per week.



## Student Activities

In recognizing the existence of "the other half" of college life, the College actively supports a co-curricular activity program that is funded by the student activity fee paid each semester. The Student Activities area represents one phase of campus life in which the students can and do have a voice in management and programming. The diversity of student interests is reflected in the 35 clubs and organizations active on campus. The involvement in Student Activities provides an opportunity to develop leadership abilities.

Credit can be earned for participation in some of these co-curricular activities. Students should check with their advisors for further information concerning these credits.

## Student Government Association

The official organization of student representation on the Broome Community College campus is the Student Government Association. Membership on the Executive Board is decided by campus wide election. The remainder of the SGA Senate is comprised of representatives from the College's Curriculums, Athletics, Media Board, Program Board, Freshman and Senior Class, Club Council. They are elected positions. The SGA Senate holds weekly meetings, Thursdays at 11

am., to discuss all issues concerning the students. These issues are then presented to the appropriate faculty, staff or administrative area. A Student Trustee sits on the College Board of Trustees and presents information of student interest to this body.

Student Government Association fulfills many student responsibilities on campus. It regularly reviews College policy and makes recommendations to the College Administration via the College Senate. Representatives of the SGA Senate serve on the Faculty-Student Association. Student Government Association has the responsibility for coordinating, distributing and supervising the student activity fee. The operation of the student government is important to students and puts student ideas and viewpoints into action.

## Program Board

One of the most active organizations on campus is the Program Board. Dances, Broadway road shows, Spring Picnic, noon-hour programs featuring famous artists and speakers, and cultural events both on and off campus are the products of the programmers' efforts. This Board is a voice of the campus in selecting the kinds of entertainment performed.

## Performing Arts

### Theatre/BCC

Complementing the studio and academic course work in theater is the group known as Theatre/BCC. All students are invited to participate, whether or not enrolled in formal course work.

Theatre/BCC enjoys a fine artistic reputation, presenting a broad range of theatrical styles, and provides its actor/technicians with varied opportunities for ensemble as well as individual training. Theatre/BCC provides a challenging and exciting experience for students with an interest in the theater, and most of its productions are performed in the intimate setting of the College's Little Theater.

**NOTE:** Students may receive transferable credit for active participation in College Choir, the Instrumental Music Association and Theatre/BCC. The conditions for this credit are available from one's advisor.

### Music

**College Choir** is sponsored jointly by the Liberal Arts Division and United Student Government. Choristers have gained an excellent reputation and are exposed to a broad range of choral literature reflecting the varied demands for community concerts. The chorus traditionally produces its own Christmas pro-

gram for local television and presents an annual Spring Concert, as well as performing for local church and civic organizations. The College Choir, moreover, makes an annual concert tour to such places as Washington, D.C., or Williamsburg, Va. Rehearsals are held weekly and all students as well as faculty and staff are welcome to sing in the ensemble.

The **Instrumental Music Association** offers students who have previously played instruments the chance to continue their involvement in small ensembles (brass, woodwind and string) and the College Stage Band. A limited program of private coaching is also available.

**BCC Jazz Ensemble** offers instrumentalists a chance to perform jazz and jazz-rock on campus, in the community, at competition and on tour. Its members strive for high quality performing and the enjoyment of working together toward this goal. A group of eight singers is used for popular arrangements with the band.

Improvisation, beginning and intermediate piano, beginning and intermediate voice, beginning guitar reading classes are available to BCC students.

The Theater and Music Programs have joined in musical theater productions. Any BCC students who are interested may audition for performance on stage or in the orchestra.

### Media Board

The students involved in activities under the Media Board have the opportunity to experiment with different forms of communication. The Fulcrum and Citadel require literary and photographic interests and skills and the Audio-Media Organization appeals to those with an interest in radio broadcasting and helps to develop those talents.

**Fulcrum** (campus newspaper) offers a variety of information for the students. It speaks out on important issues, offers the humorous side of student life, and gives the students a chance to voice their opinions through editorials and human interest stories.

**Citadel** (the yearbook) provides an opportunity for students to work on a more lasting project and to cover the entire college year in words and pictures.

**Audio-Media Organization** is for students who want to be involved in live broadcasting. This organization provides the cafeteria with recorded music—radio style—and always needs enthusiastic disc jockeys for its "WROX" operation in the cafeteria.

### Other Clubs

In addition to the co-curricular activities listed on this page and the next one, other organizations are active on campus. These include:

Art and Design Club	Inmate Education
Audio Media	International Student
Aviation Club	Organization
Camera Club	Lacrosse Club
Campus Bible Fellowship	Third World
Cheerleaders	Organization
Circle K	Newman Club
Emergency Squad	Outing Club
Ski Club	Weight Club

These are open to all full-time students and to part-timers who pay the student activity fee. Details are available in the Student Handbook and from the Director of Student Activities.

### Curriculum Organizations

In addition to the student organizations listed above that are affiliated with professional societies, the College has a number of associations that are identified with specific curriculums. Among these are the Business Club, the Civil Technology Association, the Medical Assistants Association, the Medical Laboratory Technology Society, the Student Nurses Association, the Lively Arts from the Liberal Arts curriculum, and the Student Organization of Radiologic Technologists.

### The Union

The Union is the short, flat, tan building on campus that is known as **The Place** for students to enjoy their break from the books. From eight o'clock in the morning until five in the afternoon, the Union provides diverse recreational activities. Electronic games, ping pong, pool, foosball and pinball are available for play and relaxation. The Union provides the warmth of a fireplace, a lounge for playing chess or cards, a video beam projector for viewing TV and feature films daily and, of course, vending machines.

The Union also houses offices for a number of student organizations.

### Adult Lounge

A comfortably furnished room in the Y-Building located near the Nursing Building at 901 Front Street has a refrigerator for storing bag lunches. It provides an area for study, conversation, a quiet lunch or coffee break.

### Club Council

The body that governs the actions and funding of the 35 clubs and organizations on campus is Club Council. The diversity of club activities varies with the diversity of interests of the student body. There are curriculum clubs, service organizations, international and minority student interest groups, emergency squad, choir and instrumental music clubs and various athletic organizations. Every club on campus is open for any student who pays the student activity fee. Club Council meets twice monthly with one representative from each club forming the Senate body. If a club or organizational activity that has student interest is not represented on campus, students can visit Club Council for information on starting one.

### Student Center

The busiest and most versatile building on the Broome Community College campus is the Student Center. It houses the gymnasium, the College Cafeteria, Book Store, and the Little Theater, and many of the social events are held here. This building is used by day and evening students of all curriculums.



## Professional Society Affiliates

Since exposure to organizations in their fields of study is considered of benefit to students, many curriculums have their own affiliates of national professional societies. Among these are:

**Society of Manufacturing Engineers (SME)** for Mechanical Engineering Technology and for Tool and Die Making students.

**Dental Hygiene Association**, an affiliate of the American Dental Hygiene Association.

**Institute of Electrical and Electronics Engineers (IEEE)** for Electrical Engineering Technology students.

In addition, some meetings of local professional societies are attended by students, as the **American Chemical Society** invites Chemical Engineering Technology students to its meetings. Some professional societies hold meetings on campus, too, and students are always welcome to attend. Thus students have the opportunity to become acquainted with professional people in their fields of study and to attend lectures and see films and demonstrations of new developments.

## Athletics

### Intramurals

Physical activity is a vital part of an individual's life, regardless of physical capability. With this in mind, the Students Affairs Division and the Physical Education Department coordinate an intramural program for all students enrolled at the College. Students are invited to participate in team sports such as soccer, gym hockey, basketball, volleyball and softball. For those interested in individual competition or "play for fun", sports such as tennis, golf, badminton, horseshoes and bowling are also offered. Students participating in intramurals should have a health questionnaire on file with the college Health Service. Forms are available in the Health Service (Wales Building, Room 104.).

### Women's Sports

Broome Community College fields women's teams in five varsity sports—tennis, cross country, volleyball, basketball and softball—and they have achieved some fine success in recent years.

One of the cross country runners participated in the National tournament in Hutchinson, Kans. in 1983; the tennis team has captured several individual and team regional titles in recent years and participated in the Nationals in 1983 and 1984 in Ocala, Fl.; after being the runner-up in the Region III Tournament in 1982, the volleyball team captured first place in 1983 and played

## Honor Societies

### Phi Theta Kappa

In 1962, the Mu Eta Chapter of Phi Theta Kappa was established at the College. Phi Theta Kappa is a national honor society at two-year colleges, similar in purpose to Phi Beta Kappa at the four-year colleges and universities. Mu Eta Chapter is open to freshmen and seniors at Broome CC who have achieved outstanding academic grades.

### Sigma Phi Alpha

The national dental hygiene honor society, Sigma Phi Alpha, has a chapter at Broome CC, the Upsilon Chapter. Senior Dental Hygiene students who rank highest in scholarship and who exhibit potential qualities for future growth and attainment are selected for membership.

### Tau Alpha Pi

The national honor society for students in engineering technology programs, Tau Alpha Pi has established a chapter on the Broome Community College campus. It is the Beta Theta Chapter. This society recognizes outstanding academic achievement in BCC engineering technology curriculums in Electrical, Civil, Chemical and Mechanical Technology.

in the Nationals in Catonsville, Md. Furthermore, both the basketball and softball teams have had excellent records in recent years. Cheerleading and club soccer are also available for women.

### Men's Sports

Broome Community College fields men's teams in eight varsity sports—cross country, soccer, wrestling, basketball, ice hockey, tennis, golf and baseball.

BCC athletic teams have earned an excellent reputation in two-year college competition. Included in the basketball team's 817 victories are 10 Regional titles, and in 1983-84 the squad was the runner-up in the Region III competition. Coach Dick Baldwin became one of the first inductees into the NJCAA Basketball Hall of Fame. The tennis and baseball teams have also been successful in regional competition, and in 1983 both squads were Region III champions.

The golf team has also been a recent Region III winner, capturing the team championship in 1981, 1982 and 1984.

The soccer team too has been good enough in recent years to be invited to post-season competition and the ice hockey team, which several years ago changed from club to varsity status, has shown rapid improvement and in 1983-84 posted a 17-7-1 record and was ranked 5th in the final NJCAA national poll.



# About Broome Community College

Broome Community College is a comprehensive community college. It has programs designed to prepare graduates both for immediate employment and for transfer to four-year colleges and universities at the junior, or third-year, level.

In addition to its daytime enrollment of about 4,000 full-time students last year, the college has a sizable number of part-time students. There were about 3,100 in the evening program last year and about 3,000 took courses during the Summer Session.

The College is co-educational, publicly-supported, and has historically attracted about two-thirds of its student body from Broome County and one-third from outside the county. The ratio has recently been closer to 80% and 20%.

The day student body can be classified into six parts, based on study objectives—the business programs, engineering and engineering technology curriculums, health science courses, liberal arts programs, computer studies, and special career offerings.

The College is sponsored by Broome County, supervised by the State University of New York, and accredited by both professional and educational organizations (see inside front cover). Its programs, moreover, are registered with the State Education Department.

## The Campus

The College campus is located three miles north of Binghamton on Upper Front Street, which is Route 11 and Route 12 at this point running alongside of Interstate 81. Nine of the 13 buildings form two contiguous quadrangles to make a compact campus layout.

Most of the buildings are two stories high, of modern functional design, and made of brick with colored panelwall facing. They lie in a suburban setting in the virtual center of the College's 120 acres of land.

Class are also held at the Nimmonsburg Center, one mile north of the campus on Front Street, and a new Applied Technology Classroom-Laboratory Building will be under construction during the 1984-85 college year.

In addition to classrooms and laboratories, the campus has its own cafeteria, gymnasium and athletic fields and a Little Theater. These facilities add up to make the campus a multi-million dollar investment in the youth of Broome and surrounding counties.

## The Community

The community is an industrial and agricultural area in New York State's Southern Tier. It is in the approximate center of the state, measuring from east to west, and its southern extremity touches the Pennsylvania state line.

Binghamton is the principal city in Broome County, but it is only a part of the community known as the Triple Cities. Endicott and Johnson City, along with Vestal and other suburbs, help to make the community much larger in population and geography than the city of Binghamton.

Binghamton has a population of about 55,000 and Broome County's population exceeds 200,000. Diversified industry in the community includes such firms as IBM, General Electric, The Link Division of Singer Co.,

Savin, New York State Electric & Gas Corp., Universal Instruments and Endicott Johnson.

The College has become an integral part of the community since it was started in 1946. Many of the campus facilities are offered at nominal cost for use by responsible organizations, and most of the College's curriculums are designed to help fill the economic needs of the county.

## Campus Carillon

The College has a Maas-Rowe symphonic carillon, which tolls the hours with the Westminster chimes and occasionally plays musical selections through its automatic music roll attachment. The carillon was a gift to the College, donated by a former trustee, the late Dr. Leopold Eckler, and the College Foundation.







## HISTORY OF THE COLLEGE

The College graduated its first class in 1949. These students had entered what was then known as the New York State Institute of Applied Arts and Sciences at Binghamton in the fall of 1947. The original institute was one of five founded in the state in 1946, following the pattern of six agricultural and technical institutes which New York had established earlier in the century. The first programs offered were all occupational in nature and included Chemical, Electrical and Mechanical Technology, as well as Medical and Technical Office Assistant curriculums.

In 1953 New York relinquished operating control of the school to a new sponsor, the County of Broome, under provisions of the State Community College Law, and the name was changed to Broome County Technical Institute. In 1956 the name was again changed, to Broome Technical Community College, to reflect the increasingly comprehensive nature of the educational offerings. In 1971 the name became Broome Community College as the scope of the curriculums continued to expand.

The Civil Technology program was added to the five original curriculums in 1957. Dental Hygiene was introduced in 1956, and the Business programs were expanded to include offerings in Accounting, Marketing, Engineering Secretarial in the 1950's. Executive Secretarial was added in the early 1960's.

A big change in the College's programs began in the late 1950's as a result of a new emphasis on university-parallel or transfer programs to go along with the college's occupational offerings. Engineering Science, the first two years of an engineering program, was introduced in 1958. Liberal Arts and Sciences in 1962 and Business Administration in 1963.

In the late 60's interest began to develop in the health science field. As a result, the College introduced a degree-granting program in X-Ray Technology in 1965, added Medical Laboratory Technology in 1966, Nursing a year later, and Medical Record Technology in 1969. The College was responding to the changing needs of the area and adjusting its offerings to fulfill the mission of catering to the post-high school educational needs of the community.

Criminal Justice and Child Care have been added since, and degree programs in Individual Studies and in Industrial Safety and Occupational Hygiene have also been introduced, along with Office Services Assistant. Additional new offerings have more recently been added in Computer Studies and in Tool and Die Making. A program in Word Processing has been added for 1984-85.

For its first five years, the school was housed in a refurbished State Guard Armory in downtown Binghamton. This building was located across the street from The Forum and was gutted by fire in September 1951. For the next five years, Kalurah Temple (now the Church of God Building on Washington Street) and two other buildings in the city provided temporary quarters. In 1957 the College moved to its present campus just north of Binghamton. The first addition to the original campus came with the construction of Titchener Hall, which was dedicated in 1963. The Library Building was completed five years later, and the Business Building opened in 1972.

Funding has been approved for a new Applied Technology Building, and construction was to begin in 1984. Expansion of the Student Center has also been approved.

## BCC FOUNDATION

The Broome Community College Foundation, Inc. is a not-for-profit corporation that raises private funds to assist BCC students through grants, scholarships and loans. It also helps the College by supplying funds for programs and projects for which public dollars are unavailable or insufficient. Providing faculty development funds to help faculty members attend workshops and seminars and to take graduate courses is an example of the use of these special funds.

In addition to accepting direct cash gifts, the Foundation serves as the administrative conduit for all in-kind gifts to the College. Equipment, books and works of art are examples of material received by the College through the Foundation. All gifts to the Foundation, whether cash, securities or material, are tax deductible.

## ALUMNI

The Broome Community College Alumni Association provides a link between the College and its Alumni, and its activities include the awarding of a number of scholarships each year and the active and monetary support of various college programs.

Any graduate may become a member by paying the modest lifetime dues of \$25.

There are no annual dues. Membership entitles alumni to discounts for some on-campus functions; group term/life insurance at special rates; voting eligibility for the Board of Directors including rights to stand for election to a seat on the Board. Alumni also receive the College's BCC NEWSLETTER, and the Alumni Association conducts an annual Dinner-Dance. Alumni are encouraged to join and participate.

## FACULTY-STUDENT ASSOCIATION

The Faculty-Student Association of Broome Community College, Inc., is an educational corporation designed to provide to the College, and particularly to the students and faculty, services that are not included in the regular College budget.

It provides the corporation organization through which the student fees are expended under a budget prepared by the Student Government Association. It also operates the College Book Store.

The Book Store earnings augment student fees to support new or special activities. The association is governed by a board of directors elected by members who hold certain offices on campus. The operating philosophy is to make the educational program outside of the classroom a well-rounded supplement to the students' academic experiences.

# Programs of Study by Curriculum

The academic programs, whose display of courses appears on pages 34 to 61, are designed primarily for full-time students of the College. It is possible, however, for one to study for an associate degree in any of these curriculums on a part-time basis. To do this, one should contact the appropriate department chairperson. The College's programs that are intended mainly for part-time students appear on pages 62 to 70.

## BUSINESS

DEPARTMENT CHAIRMAN, W. JAMES ABBOTT  
Business Building, Room 105  
Telephone 771-5246

ACADEMIC ADVISING, WILLIAM MATECHAK  
Business Building, Room 107  
Telephone 771-5133

COORDINATOR OF ACCOUNTING  
Ralph Holloway  
Business Building, Room 135  
Telephone 771-5139

COORDINATOR OF BUSINESS ADMINISTRATION  
John Bunnell  
Business Building, Room 234  
Telephone 771-5263

COORDINATOR OF MARKETING  
Robert Newcomb  
Business Building, Room 103  
Telephone 771-5174

COORDINATOR OF MANAGEMENT  
Kenneth Sanford  
Business Building, Room 106  
Telephone 771-5171

The Business Department offers courses of study in three areas—Accounting, Business Administration and Marketing. In addition, emphases are offered within these curricula in banking, management and sales. These programs were planned with the assistance of advisory committees, made up of businessmen and women currently working in the fields.

To assist the incoming student in selecting the proper option, all have a common first semester. Thus, the final decision of programs can be delayed until registration for the second semester.

Cooperative work experience is available to many business students. This course offers the student both first-hand practical experience and college credit.

A majority of these programs is designed to prepare the graduate for immediate employment. Others, such as Business Administration, are designed to facilitate transfer to a four-year college or university. However, transfer of some courses is possible from each of the programs.

As every college has its own transfer policy, the number of credits accepted will vary. As soon as students identify the school to which they wish to transfer, they should contact that institution to determine the courses which are acceptable.

## BUSINESS ADMINISTRATION

### FIRST YEAR Fall Semester

		Hours per Class	Week Lab	Credits per Semester
BUS 100	Accounting I	4	0	4
*BUS 112	Quantitative Business Methods	2	0	2
BUS 118	Business Law I	3	0	3
BUS 141	Marketing	3	0	3
ENG 110	Written Expression I	3	0	3
		15	0	15

### Spring Semester

BUS 101	Accounting II	4	0	4
BUS 120	Business Law II	3	0	3
CST 110	Introduction to Data Processing	3	0	3
BUS 115	Business Statistics	3	0	3
ENG 120	Written Expression II	3	0	3
		16	0	16

\*If a student has passed the Quantitative Business Methods placement test, he/she takes a free elective.

### SECOND YEAR Fall Semester

Elect 1 of the following 4 courses:				
BUS 200	Intermediate Accounting I	(4)	0	(4)
BUS 249	Personnel Management	(3)	0	(3)
CST	Computer Programming			
	Elective	(2)	(2)	(3)
	Liberal Arts Elective	(3)	0	(3)
ECO 110	Introduction to Micro-Economics	3	0	3
MAT 121	Finite Mathematics	3	0	3
	Lab Science Elective	3	3	4
	Liberal Arts Elective	3	0	3
PED	Physical Education	2	0	1
		16-18	3-5	17-18

### Spring Semester

Elect 1 of the following 4 courses:				
BUS 201	Intermediate Accounting II	(4)	0	(4)
BUS 245	Management: A Behavioral Approach	(3)	0	(3)
	Liberal Arts Elective	(3)	0	(3)
	Computer Programming			
	Elective	(2)	(2)	(3)
ECO 111	Introduction to Macro-Economics	3	0	3
MAT 146	Introduction to Calculus	3	0	3
	Lab Science Elective	3	3	4
	Liberal Arts Elective	3	0	3
		14-16	3-5	16-17



# ACCOUNTING

## FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS 100	Accounting I .....	4	0	4
BUS 112	Quantitative Business Methods .....	2	0	2
BUS 118	Business Law I .....	3	0	3
BUS 141	Marketing .....	3	0	3
ENG 110	Written Expression I .....	3	0	3
		15	0	15

## Spring Semester

BUS 101	Accounting II .....	4	0	4
CST 110	Introduction to Data Processing .....	3	0	3
ENG 120	Written Expression II .....	3	0	3
*MAT 117	Elementary Finite Mathematics or .....	4-3	0	4-3
*MAT 121	Finite Mathematics Elect 1 of the following:			
BUS 115	Business Statistics .....	3	0	3
BUS 120	Business Law II .....			
BUS 157	Report Writing .....			
		16-17	0	16-17

\*Students who have passed Math 11 or Intermediate Algebra in high school will take MAT 121 Finite Mathematics.

## SECOND YEAR Fall Semester

BUS 200	Intermediate Accounting I .....	4	0	4
BUS 205	Cost Accounting I .....	4	0	4
PHS	Physical Science .....	3	3	4
	Student may choose PHS 113, 114, 115 or 116			
	Social Science Elective .....	3	0	3
	Elect 1 of the following:			
BUS 245	Management: A Behavioral Approach .....	(3)	(0)	(3)
†BUS 115	Business Statistics .....	(3)	(0)	(3)
CST	A programming language course .....	(2)	(2)	(3)
		15-17	2-4	17-18

## Spring Semester

BUS 201	Intermediate Accounting II .....	4	0	4
BUS 206	Cost Accounting II .....	4	0	4
SPK 102	Effective Speaking .....	3	0	3
	Social Science Elective .....	3	0	3
	Elect 1 of the following:			
BUS 270	Decision Making .....	(3)	(0)	(3)
BUS 295	Accounting Seminar .....	(4)	(0)	(4)
CST	A programming language course .....	(2)	(2)	(3)
		16-19	0-2	17-19

†This course required of any student planning to take BUS 270 Decision Making.

# ACCOUNTING—BANKING EMPHASIS

## FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS 100	Accounting I .....	4	0	4
BUS 112	Quantitative Business Methods .....	2	0	2
BUS 118	Business Law I .....	3	0	3
BUS 141	Marketing .....	3	0	3
ENG 110	Written Expression I .....	3	0	3
		15	0	15

## Spring Semester

BUS 101	Accounting II .....	4	0	4
BUS 120	Business Law II .....	3	0	3
*ECO 111	Introduction to Macro-Economics .....	3	0	3
ENG 120	Written Expression II .....	3	0	3
PSY 110	Psychology .....	3	0	3
		16	0	16

## SECOND YEAR Fall Semester

BUS 245	Management: A Behavioral Approach .....	3	0	3
CST 110	Introduction to Data Processing .....	3	0	3
SPK 102	Effective Speaking .....	3	0	3
PHS	Physical Science .....	3	3	4
	Students may choose PHS 113, 114, 115 or 116			
*ECO 253	Money and Banking .....	3	0	3
		14	2	15

## Spring Semester

BUS 249	Personnel Management .....	3	0	3
BUS 224	Business Finance .....	3	0	3
BUS 152	Selling Fundamentals .....	3	0	3
	Mathematics or Science Elective .....	3-4	0-3	3-4
	#Business Elective .....	3-4	0	3-4
		15-17	0-3	15-17

\*ECO 111 is a prerequisite for ECO 253. If enrollment does not justify offering daytime sections of ECO 253, students must attend evening classes in this subject.

#Suggested Business Electives include such American Institute of Banking (AIB) courses as Analyzing Financial Statements, Installment Credit, Principles of Bank Operations, as well as BUS 297 Co-operative Work Experience.

**MANAGEMENT EMPHASIS**

**FIRST YEAR  
Fall Semester**

			Hours per Week		Credits per Semester
			Class	Lab	
BUS 100	Accounting I	.....	4	0	4
BUS 112	Quantitative Business Methods	.....	2	0	2
BUS 118	Business Law I	.....	3	0	3
BUS 141	Marketing	.....	3	0	3
ENG 110	Written Expression I	.....	3	0	3
			15	0	15

**Spring Semester**

BUS 101	Accounting II	.....	4	0	4
BUS 120	Business Law II	.....	3	0	3
ENG 120	Written Expression II	.....	3	0	3
PHS 111	Physical Science for Today	.....	2	2	3
*MAT 117	Elementary Finite Mathematics	.....	4-3	0	4-3
			or		
*MAT 121	Finite Mathematics	.....	4-3	0	4-3
			16-15	2	16-15

**SECOND YEAR  
Fall Semester**

BUS 115	Business Statistics	.....	3	0	3
BUS 152	Selling Fundamentals	.....	3	0	3
BUS 245	Management: A Behavioral Approach	.....	3	0	3
CST 110	Introduction to Data Processing	.....	3	0	3
SPK 102	Effective Speaking	.....	3	0	3
ECO 110	Micro-Economics	.....	3	0	3
			18	0	18

**Spring Semester**

BUS 224	Business Finance	.....	3	0	3
BUS 270	Decision Making	.....	3	0	3
BUS 249	Personnel Management	.....	3	0	3
			Elect 1 of the following:		
CST 118	Computer Programming—				
	COBOL	.....	(2)	(2)	(3)
CST 120	Computer Programming—				
	FORTTRAN	.....	(2)	(2)	(3)
	Business Elective	.....	(3)	(0)	(3)
	Social Science Elective	.....	3	0	3
			14-15	0-2	15-16

\*If a student has passed Mathematics 11 or Intermediate Algebra in high school, he/she takes MAT 121 Finite Mathematics.

**SALES EMPHASIS**

**FIRST YEAR  
Fall Semester**

			Hours per Week		Credits per Semester
			Class	Lab	
BUS 100	Accounting I	.....	4	0	4
BUS 112	Quantitative Business Methods	.....	2	0	2
BUS 118	Business Law I	.....	3	0	3
BUS 141	Marketing	.....	3	0	3
ENG 110	Written Expression I	.....	3	0	3
			15	0	15

**Spring Semester**

BUS 120	Business Law II	.....	3	0	3
BUS 152	Selling Fundamentals	.....	3	0	3
BUS 249	Personnel Management	.....	3	0	3
ENG 120	Written Expression II	.....	3	0	3
PSY 110	Psychology	.....	3	0	3
			15	0	15

**SECOND YEAR  
Fall Semester**

BUS 229	Advertising	.....	4	0	4
CST 110	Introduction to Data Processing	.....	3	0	3
SPK 102	Effective Speaking	.....	3	0	3
PHS 111	Physical Science for Today	.....	2	2	3
BUS	Business Elective	.....	3-4	0	3-4
ECO 110	Micro Economics	.....	3	0	3
			or		
SOC 110	Introduction to Sociology	.....	3	0	3
			18-19	2	19-20

**Spring Semester**

BUS 129	Consumer Behavior	.....	3	0	3
BUS 259	Business Report Writing	.....	3	0	3
BUS 242	Marketing Seminar	.....	3	0	3
BUS 245	Management: A Behavioral Approach	.....	3	0	3
BUS 264	Retailing	.....	3	0	3
	Mathematics or Science Elective	.....	3-4	0-3	3-4
			18-19	0-3	18-19



## CHEMICAL ENGINEERING TECHNOLOGY

DEPARTMENT CHAIRMAN, James Spalik  
Science Building, Room 108, Telephone 771-5009

The Chemical Engineering Technology curriculum is designed to meet the increasing demand for chemical technicians. Graduates of the Chemical Engineering Technology program have the education and training which qualifies them for immediate gainful employment and/or further study for advanced degrees. This background makes the Chemical Engineering Technology graduates highly sought after by employers and concurrently affords them the flexibility to advance academically.

Chemical technicians of both sexes have filled a vital manpower need in companies and organizations where background in various areas of chemistry is necessary or desirable. The constant development of new products, for example, creates a demand for chemical technicians.

Employers of chemical technicians include IBM, Anitec, Eastman Kodak, Allied Chemical, DuPont, Norwich-Eaton Pharmaceuticals, GE,

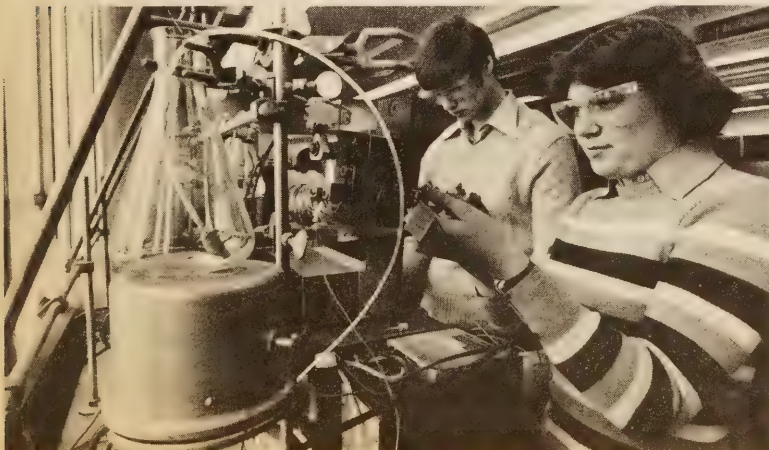
American Cyanamid, Union Carbide, Bristol Laboratories, Warner-Lambert and many other industrial firms as well as government agencies, hospitals and educational institutions.

Initial positions are usually in a research, development, process, quality control or analytical laboratory or in a pilot plant. In these positions a chemical technician may work for a senior staff member or be a member of a group working in a particular area. Experienced chemical technicians have become supervisors, group leaders, technical salesmen and research and development technicians.

The 1983 graduates of this program averaged \$15,956 in starting salaries, as these ranged from \$20,852 to \$9,200.

This curriculum is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

Chemical Engineering Technology students operating a high performance liquid chromatograph in one of the College's Instrumental Analysis Laboratories.



### FIRST YEAR Fall Semester

			Hours per Week		Credits
			Class	Lab	per Semester
ENG 110	Written Expression I	.....	3	0	3
CHM 161	Chemistry	.....	3	3	4
*MAT 141	Algebra and Trigonometry	.....	4	0	4
†PHY 141	Physics	.....	3	2	4
			13	5	15

### Spring Semester

ENG 150	Technical Writing	.....	3	0	3
CHM 162	Chemistry	.....	3	3	4
*MAT 142	Applied Calculus I	.....	4	0	4
†PHY 142	Physics	.....	3	2	4
CST 140	Computer for Chemists	.....	2	2	3
			15	7	18

### SECOND YEAR Fall Semester

CHM 261	Organic Chemistry	.....	3	6	5
CHM 265	Analytical Chemistry	.....	3	6	5
CHM 271	Chemical Processes	.....	3	4	5
	Social Science Elective	.....	3	0	3
			12	16	18

### Spring Semester

CHM 262	Organic Chemistry	.....	3	6	5
CHM 266	Analytical Chemistry	.....	3	6	5
CHM 272	Chemical Processes	.....	3	4	5
	Social Science Elective	.....	3	0	3
			12	16	18

### GRADUATION REQUIREMENT: 69 CREDITS

\*or MAT 163-164 Calculus with Analytic Geometry I and II

†or PHY 161-162 Physics

## CHILD CARE

DEPARTMENT CHAIRMAN, Francis J. Short  
Department of Special Career Programs  
Mechanical Building, Room 214  
Telephone 771-5087

COORDINATOR: Marilyn Schafer  
Mechanical Building, Room 219, Telephone 771-5029

This Child Care program leads to an Associate in Applied Science (AAS) degree and is designed to prepare graduates for immediate employment or, in the case of those students who are already working in the Child Care field when they enroll, to improve their capabilities and increase their opportunities for advancement. It is open to students on both a full-time and a part-time basis.

The starting salary for graduates of the AAS degree program in Child Care who go to work immediately after graduation as aides or assistant teachers varies between \$4 and \$5 per hour. Directors' positions usually require a baccalaureate degree with an average salary of \$14,000 to \$17,000 a year. Two-year college graduates sometimes become direc-

tors with an additional salary which will vary with teachers' salaries.

A professional portfolio of materials pertaining to the education of young children is required of all students in the program. Assistance is provided in all classes for development of this material.

### PLEASE NOTE

The curriculum display shown here is for full-time students, and they should be aware that careful advisement is necessary to enable them to be properly scheduled in this program to complete the work in two years. *Anyone interested in enrolling as a full-time student should, therefore, consult with the coordinator or department chairman first.* The curriculum display for part-time students appears on page 65.

### FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
ENG	110	Written Expression I .....	3	0	3
PSY	110	General Psychology .....	3	0	3
SOC	110	Introduction to Sociology .....	3	0	3
*CDC	110	Introduction to Education of Young Children .....	2	2	3
†CDC		Child Care Elective .....	2-3	0-2	3
			13-14	2-4	15

### Spring Semester

ENG		English or Literature Elective .....	3	0	3
PSY	211	Child Development .....	3	0	3
*CDC	120	Curriculum Development .....	2	2	3
		Humanities Elective .....	3	0	3
†		Related Elective .....	3	0	3
			14	2	15

### SECOND YEAR Fall Semester

*CDC	170	Practicum I .....			3
†CDC		Child Care Elective .....	2-3	0-2	3
		Math/Science Elective .....	3-4	0-3	3-4
†CDC		Child Care Elective .....	2-3	0-2	3
		†Related Elective .....	3	0	3
			10-13	0-7	15-16

### Spring Semester

*CDC	240	Social Development of Young Children .....	2	2	3
*CDC	290	Practicum II .....			6
†CDC		Child Care Elective .....	2-3	2-0	3
		Math/Science Elective .....	3-4	0-3	3-4
			7-9	2-7	15-16

### \*CDC COURSES ARE GIVEN MAINLY IN THE EVENING.

†CDC electives may be taken from among CDC 115 Music for Young Children, CDC 140 Art for Young Children, CDC 150 Motor Development, CDC 160 Nutrition for Young Children, CDC 180 Child Health and Safety, CDC 210 Special Problems in Children, CDC 220 Trends in Education of Young Children, CDC 230 Working with Parents in Nursery Programs, CDC 250 Language in Early Childhood, LIT 263 Children's Literature, CDC 190 Infants, Toddlers and the Family.

†Related electives may be taken from among PSY 212 Adolescent Development, PSY 214 Abnormal Psychology, PSY 217 Counseling and Interviewing, PSY 227 Behavior Modification, SOC 210 Crime and Deviant Behavior, SOC 230 Marriage, Family and Divorce, SAC 101 The Individual in a Changing Environment, SAC 295 Seminar in Human Potential or from other disciplines.



The Civil Engineering Technology curriculum at Broome Community College is designed to prepare graduates for technical positions in the civil engineering and construction industries. The primary objective of the program is to train engineering technicians who will work for civil engineers, heavy and building contractors, surveyors and architects. The construction industry, considering all related goods and services such as manufacturing and transportation, is the largest industry in the country.

Starting positions may be in computer-aided design (CAD), drafting design, estimating, testing of materials, specification writing, construction inspection, surveying, field engineering, sales and insurance adjusting. Excellent opportunities exist for advancement and promotion. Starting salaries in 1983 averaged

## CIVIL ENGINEERING TECHNOLOGY

DEPARTMENT CHAIRMAN, Edward F. Dougherty  
Mechanical Building Room 117  
Telephone 771-5223

\$13,414 and ranged from \$17,070 to \$10,000.

The Civil Engineering Technology Department offers two degrees: 1—the Associate in Applied Science degree in Civil Engineering Technology is offered during the day. This degree is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). 2—The Associate in Applied Science degree in Industrial Technology, Civil Technology major, is offered in the evening.

### FIRST YEAR Fall Semester

		Hours per Week		Credits
		Class	Lab	per Semester
CIV 111	Surveying I	2	6	4
CIV 115	Engineering Drawing I	1	3	2
CIV 110	Introduction to Technologies	1	0	½
ENG 110	Written Expression I	3	0	3
†MAT 141	Algebra and Trigonometry	4	0	4
*PHY 141	Physics	3	2	4
		14	11	17½

### Spring Semester

CIV 112	Surveying II	1	3	2
CIV 117	Architectural Drafting I	1	3	2
CIV 124	Mechanics	3	0	3
†MAT 142	Applied Calculus I	4	0	4
PHY 142	Physics	3	2	4
ENG 150	Technical Writing	3	0	3
		15	8	18

\*Students entering the program without physics may elect to take PHY 100 Preparatory Physics I during the first semester in place of PHY 141 Physics. PHY 141 Physics may be taken during the spring semester and PHY 142 Physics during the summer. This would allow the student to graduate on schedule. Preparatory Physics is not applicable toward the degree.

†Or MAT 163-164 Calculus with Analytic Geometry I and II.

Graduates of the program are eligible to become certified as Associate Engineering Technicians by the Institute for the Certification of Engineering Technicians.

It is expected that, nationwide, many new and exciting jobs will be created. The energy crisis has brought a great increase in activity to make this country self-sufficient. Billions of dollars will be spent on

electric power generation, environmental pollution control and the infrastructure.

In order for students to complete the curriculum in two years, the proper preparation is necessary. The minimum prerequisites are high school intermediate algebra, trigonometry and regents physics or their equivalents. For those wishing to enter the program without these prerequisites, Broome Community College offers the necessary preparatory courses. It would then usually take an additional semester or two to graduate. A special schedule will be worked out with the department chairman.

### SECOND YEAR Fall Semester

CIV 215	Strength of Materials	4	0	4
CIV 217	Materials Testing	2	3	3
CST 122	Scientific Computer Programming FORTRAN	2	2	3
	Social Science Elective	3	0	3
	Technical Elective (Choose 1)			
CIV 238	Architectural Design and Building Materials	(2)	(3)	(3)
CAD 200	Introduction to Computer Graphics	(2)	(4)	(3)
*MAT	Mathematics Elective	(4)	(0)	(4)
		13-15	5-9	16-17

### Spring Semester

†CIV 224	Reinforced Concrete Design			
	or	2	3	3
CIV 226	Structural Steel Design			
	Social Science Elective	3	0	3
	Technical Electives (Choose at least 10 credits)			
CIV 212	Route Surveying and Photogrammetry	(3)	(3)	(4)
CIV 236	Construction Management	(3)	(0)	(3)
CIV 231	Estimating and Construction Planning	(2)	(3)	(3)
CIV 240	Soil Mechanics	(2)	(3)	(3)
CIV 235	Hydraulics	(3)	(3)	(4)
*MAT	Mathematics Elective	(3)	(0)	(3)
		14-15	6-15	17-18

†Waiver of this requirement by permission of department chairman only.

\*For students planning to transfer to a 4-year college. Prior approval by department chairman required.

## COMPUTER STUDIES

DEPARTMENT CHAIRPERSON, Mary Diegert  
Titchener Hall Room 221-F  
Telephone 772-5022

The Computer Studies Department at Broome Community College offers three degree programs in the computer field — Computer Science, Data Processing and Computer Technology. The Computer Science program leads to the Associate in Science degree, while graduates of the other two receive the Associate in Applied Science degree.

In every Computer Studies program the student must learn to write well documented, easy to read, structured programs. The required structured programming language Pascal leads toward that goal.

Students who choose a career in computing must, above all else, have the ability to think logically. They should be interested in organizing and analyzing information and should be able to pay close attention to detail and accuracy. Advancement in this career requires the personal drive to explore new fields of interest and the ability to communicate with people working in these fields.

**THE COMPUTER SCIENCE PROGRAM** prepares students for interesting and challenging careers in systems and applications programming, mathematics, and systems analysis by providing the first two years of a four-year degree sequence. During the first semester the student selects an emphasis and is encouraged to investigate transfer colleges with a future career in mind.

The following programs are offered for the student who does not plan to transfer to a four-year college but who plans to find a job. These graduates will be competing with four-year degree graduates in the job market and are advised that they must have skills beyond computing to interest employers. Many graduates will find jobs in computer-related fields rather than as programmers.

**THE DATA PROCESSING PROGRAM** is business oriented. It prepares students for work in a business environment where a knowledge of computer programming is required. Students learn to use the computer to analyze and solve business problems. There is a strong emphasis on clear documentation and on communication.

**THE COMPUTER TECHNOLOGY PROGRAM** is technically oriented. It prepares students for work in a technical environment where a knowledge of the interface between hardware and software is needed. Students learn both high level and assembly level languages. There is a strong emphasis on clear communication both written and oral.

**STUDENTS CAN STUDY FOR THESE DEGREES FULL-TIME OR PART-TIME, DAY OR EVENING.** Special information for part-time students on pages 62 to 70.

## COMPUTER SCIENCE (Associate in Science Degree)

All students in the Computer Science curriculum should choose an emphasis after the first semester. Three emphases are shown on this and the next page — Business, Mathematics and Technical. The listing below summarizes the degree requirements by category.

	Credits Required
CST 113 Pascal with Structured Programming .....	5
MAT or CST Electives. ....	9
Student must choose either	
CST 202 Advanced Pascal with Data Structures or	
CST 118 COBOL and CST 218 Advanced COBOL Mathematics.....	16
MAT 163 Calculus with Analytic Geometry I	
MAT 164 Calculus with Analytic Geometry II	
MAT 252 Mathematical Modeling with the Computer	
MAT 264 Linear Algebra	
Laboratory Science Sequence.....	8
A full year sequence of physics, chemistry or physical science. Acceptable sequences:	
PHY 161-162 Physics; CHM 145-146 Chemistry;	
PHS 113, 114, 115, 116 Physical Science (any 2).	
English or Literature.....	6
Social Science .....	6
Any two courses from the following disciplines: anthropology, economics, geography, political science, psychology, sociology, social science.	
These have ANT, ECO, GEO, POS, PSY, SOC, SOS designators.	
History .....	3
Philosophy .....	3
PHI 202 Logic	
Physical Education .....	2
Approved Electives .....	6
See emphases for recommended choices. All others must have Department Chairman approval.	

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**GRADUATION REQUIREMENT: 64 CREDITS**



**COMPUTER SCIENCE  
Business Emphasis  
(Associate in Science Degree)**

**FIRST YEAR  
Fall Semester**

		Hours per Week		Credits
		Class	Lab	per Semester
CST 113	Pascal with Structured Programming.....	4	2	5
MAT 163	Calculus with Analytic Geometry I.....	4	0	4
ENG 110	Written Expression 1.....	3	0	3
	Social Science Elective.....	3	0	3
	Physical Education Electives.....	0	2	1
		14	4	16

**Spring Semester**

CST 118	COBOL.....	2	2	3
MAT 164	Calculus with Analytic Geometry II.....	4	0	4
ENG 120	Written Expression II.....	3	0	3
ENG 150	Technical Report Writing.....			
PHI 202	Logic.....	3	0	3
	Social Science Elective.....	3	0	3
	Physical Education Electives.....	0	2	1
		15	4	17

**SECOND YEAR  
Fall Semester**

CST 218	Advanced COBOL.....	2	2	3
MAT 252	Mathematical Modeling with Computer.....	4	0	4
MAT 264	Linear Algebra.....			
BUS 100	Accounting I.....	4	0	4
	Laboratory Science (begin a sequence).....	3	3	4
	History Elective.....	3	0	3
		16	5	18

**Spring Semester**

MAT 252	Mathematical Modeling with Computer.....	4	0	4
MAT 264	Linear Algebra.....			
	Laboratory Science (complete sequence).....	3	3	4
BUS 101	Accounting II.....	4	0	4
	One of the following:			
CST 200	Systems Analysis 1.....	(2)	(2)	(3)
CST 126	Assembly Programming — BAL.....	(2)	(2)	(3)
CST 170	Digital Logic.....	(2)	(2)	(3)
MAT 124	Statistics.....	(3)	(0)	(3)
		13-14	3-5	15

**COMPUTER SCIENCE  
Mathematics Emphasis  
(Associate in Science Degree)**

**FIRST YEAR  
Fall Semester**

		Hours per Week		Credits
		Class	Lab	per Semester
CST 113	Pascal with Structured Programming.....	4	2	5
MAT 163	Calculus with Analytic Geometry I.....	4	0	4
ENG 110	Written Expression 1.....	3	0	3
	Social Science Elective.....	3	0	3
	Physical Education Electives.....	0	2	1
		14	4	16

**Spring Semester**

CST 202	Advanced Pascal with Data Structures.....	2	2	3
MAT 164	Calculus with Analytic Geometry II.....	4	0	4
ENG 120	Written Expression II.....	3	0	3
ENG 150	Technical Report Writing.....			
PHI 202	Logic.....	3	0	3
	Social Science Elective.....	3	0	3
	Physical Education Electives.....	0	2	1
		15	4	17

**SECOND YEAR  
Fall Semester**

CST 170	Digital Logic.....	2	2	3
MAT 263	Calculus with Analytic Geometry III.....	4	0	4
MAT 252	Mathematical Modeling with Computer.....	4	0	4
MAT 264	Linear Algebra.....			
PHY 161	Physics I.....	3	3	4
	History Elective.....	3	0	3
		16	5	18

**Spring Semester**

CST 126	Assembly Programming — BAL.....	2	2	3
CST 220	Introduction to Microprocessors.....			
MAT 252	Mathematical Modeling with Computer.....	4	0	4
MAT 264	Linear Algebra.....			
MAT 266	Introduction to Higher Mathematics.....	3	0	3
PHY 162	Physics 2.....	3	3	4
		12	5	14

# COMPUTER SCIENCE Technical Emphasis (Associate in Science Degree)

## FIRST YEAR Fall Semester

		Hours per Week		Credits
		Class	Lab	per Semester
CST 113	Pascal with Structured Programming.....	4	2	5
MAT 163	Calculus with Analytic Geometry I....	4	0	4
ENG 110	Written Expression 1 .....	3	0	3
	Social Science Elective .....	3	0	3
	Physical Education Electives.....	0	2	1
		14	4	16

## Spring Semester

CST 170	Digital Logic .....	2	2	3
CST 202	Advanced Pascal with Data Structures.....	2	2	3
MAT 164	Calculus with Analytic Geometry II .....	4	0	4
ENG 120	Written Expression II.....	3	0	3
ENG 150	Technical Report Writing .....			
PHI 202	Logic .....	3	0	3
	Physical Education Electives.....	0	2	1
		14	6	17

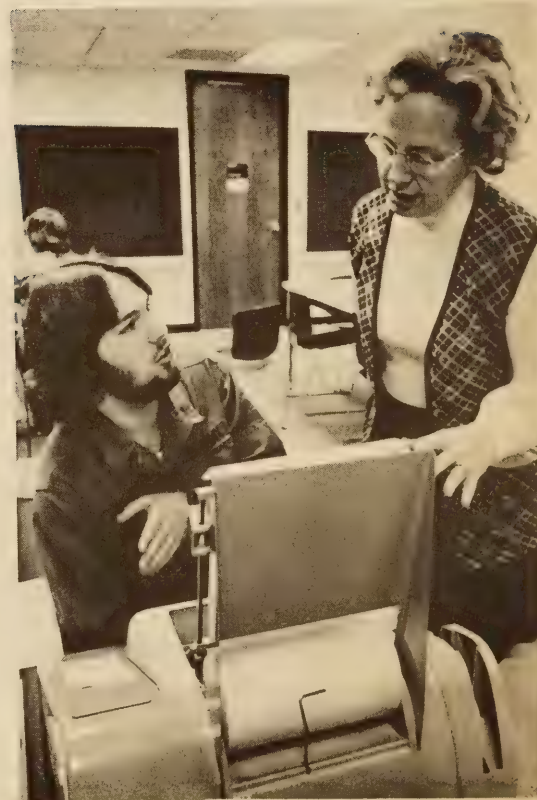
## SECOND YEAR Fall Semester

CST 124	Programming for Engineering and Computer Science.....	2	2	3
CST 220	Introduction to Microprocessors....	2	2	3
MAT 252	Mathematical Modeling with Computer.....	4	0	4
MAT 264	Linear Algebra .....			
PHY 161	Physics I.....	3	3	4
	History Elective .....	3	0	3
		14	7	17

## Spring Semester

CST 225	Introduction to Small Systems.....	2	2	3
MAT 252	Mathematical Modeling with Computer .....	4	0	4
MAT 264	Linear Algebra .....			
PHY 162	Physics II .....	3	3	4
	Social Science Elective .....	3	0	3
		12	5	14

Computer Studies professor discussing a problem with a student in one of the College's Computer Laboratories.





# COMPUTER TECHNOLOGY (Associate in Applied Science Degree)

## FIRST YEAR Fall Semester

		Hours per Week Class	per Lab	Credits Semester
CST 113	Pascal with Structured Programming.....	4	2	5
ENG 110	Written Expression I.....	3	0	3
MAT 124	Statistics.....	3	0	3
	*Laboratory Science Sequence.....	3	2-3	4
		13	4-5	15

## Spring Semester

CST 170	Digital Logic.....	2	2	3
CST 124	Programming for Engineering and Computer Science.....	2	2	3
	or			
CST 202	Advanced Pascal with Data Structures.....	2	2	3
ENG 150	Technical Writing.....	3	0	3
SPK 102	Effective Speaking.....	3	0	3
	*Laboratory Science Sequence.....	3	2-3	4
		13	6-7	16

## SECOND YEAR Fall Semester

CST 220	Introduction to Microprocessors.....	2	2	3
CST 124	Programming for Engineering and Computer Science.....	2	2	3
	or			
CST 202	Advanced Pascal with Data Structures.....	2	2	3
	or			
CST 205	Advanced Fortran.....	4	0	4
MAT 152	Discrete Mathematics.....	2-4	0-4	3-4
	† Approved Elective.....	3	0	3
	# Social Science Elective.....	3	0	3
		13-15	4-8	16-17

## Spring Semester

CST 126	Assembly Programming — BAL.....	2	2	3
CST 222	Topics in Computer Systems.....	2	2	3
CST 225	Introduction to Small Systems.....	2	2	3
	† Approved Elective.....	2-4	0-4	3-4
	# Social Science Elective.....	3	0	3
		11-13	6-10	15-16

## GRADUATION REQUIREMENT: 62 CREDITS

\*A full year sequence of physics, chemistry, or physical science. Acceptable sequences: PHY 141-142 Physics; CHM 145-146 Chemistry; PHS 113, 114, 115, 116 Physical Science (any 2).

† CST 202, CST 205, MAT 163, MAT 164, CAD 200, CAD 201. Others require approval of Department Chairperson.

# Any two courses from the following disciplines: anthropology, economics, geography, political science, psychology, sociology, social science. These have ANT, ECO, GEO, POS, PSY, SOC, SOS designators.

# DATA PROCESSING (Associate in Applied Science Degree)

## FIRST YEAR Fall Semester

		Hours per Week Class	per Lab	Credits Semester
CST 113	Pascal with Structured Programming.....	4	2	5
ENG 110	Written Expression I.....	3	0	3
MAT 124	Statistics.....	3	0	3
BUS 100	Accounting I.....	4	0	4
		13	2	15

## Spring Semester

CST 118	COBOL.....	2	2	3
ENG 120	Written Expression II.....	3	0	3
MAT 152	Discrete Mathematics.....	4	0	4
BUS 101	Accounting II.....	4	0	4
BUS 270	Decision Making.....	3	0	3
		16	2	17

## SECOND YEAR Fall Semester

CST 200	Systems Analysis I.....	2	2	3
CST 218	Advanced COBOL.....	2	2	3
BUS 157	Business Report Writing.....	3	0	3
	* Physical Science Elective.....	3	2	4
	† Social Science Elective.....	3	0	3
		13	6	16

## Spring Semester

CST 116	RPG II.....	2	2	3
CST 201	Systems Analysis II.....	2	2	3
CST 211	Small Systems Applications.....	2	2	3
SPK 102	Effective Speaking.....	3	0	3
	† Social Science Elective.....	3	0	3
		12	6	15

## GRADUATION REQUIREMENT: 63 CREDITS

\*Any one of the following physical science courses:  
PHS 113, 114, 115, 116

† Any two courses from the following disciplines: anthropology, economics, geography, political science, psychology, sociology, social science. These have ANT, ECO, GEO, POS, PSY, SOC, SOS designators.

## DENTAL HYGIENE

DEPARTMENT CHAIRMAN, Dr. Frederick Johnson  
Science Building, Room 108  
Telephone 771-5149

The Dental Hygiene curriculum is designed to prepare students for the contemporary practice of dental hygiene. The curriculum emphasizes the fundamental knowledge necessary for practice in a private dental office or similar clinical setting under the supervision of a dentist.

The dental hygienist performs various services, such as dental prophylaxis, topical fluoride applications, dental radiographs and instruction in plaque control procedures. Successful completion of the curriculum permits one to take the required written and practical licensure examinations.

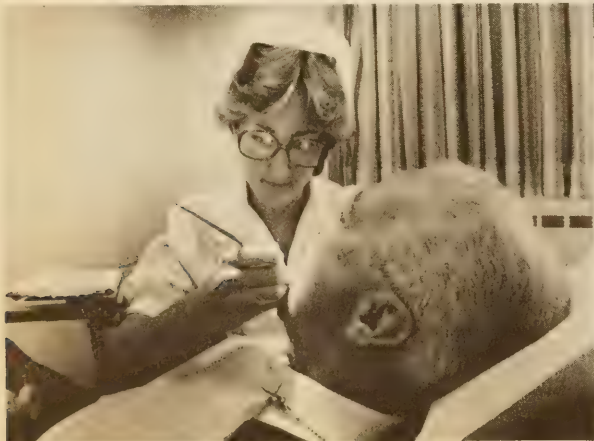
Dental Hygiene graduates averaged \$13,908 as starting salaries in 1983, encompassing a range from \$17,000 to \$10,816.

Students must purchase instruments and pants uniforms which range from \$400-\$450 and pay license examination fees which range from \$200-\$250, in addition to textbooks. They are also expected to purchase protective eye glasses and disposable rubber gloves for use during clinical practice.

Students who wish to pursue a career as a dental hygienist in public health, health management, health education or dental hygiene education are encouraged to transfer to a baccalaureate program after graduation.

The program is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Council on Post-secondary Accreditation and by the United States Department of Education.

Dental Hygiene student cleaning a patient's teeth in the Dr. James T. Ivory Clinic on the campus.



### FIRST YEAR Fall Semester

			Credits	
			per	
		Hours per Week	Class	Lab
BIO 131	Human Biology I	3	2	4
DEN 101	Dental Hygiene I	2	6	4
DEN 103	Oral Anatomy and Physiology	2	4	4
ENG 110	Written Expression I	3	0	3
†HSV 101	Cardio-Pulmonary Resuscitation	0	1	1/2
		10	13	15 1/2

†This course will average out to one hour per week over the semester, but it will probably be given in clusters of 3 hours each in the evening or of 7 1/2 hours each on Saturday to make a total of 15 hours.

### Spring Semester

BIO 132	Human Biology II	3	2	4
DEN 102	Dental Hygiene II	4	8	6
DEN 106	Clinical Dental Radiography	1	2	2
BIO 160	Microbiology	2	3	3
SPK 102	Effective Speaking	3	0	3
		13	15	18

### SECOND YEAR Fall Semester

DEN 201	Dental Hygiene III	2	12	5
DEN 204	General and Oral Pathology	3	0	3
DEN 205	Periodontology	2	0	2
DEN 209	Nutrition	3	0	3
DEN 213	Public Health	2	2	3
PSY 110	General Psychology	3	0	3
		15	14	19

### Spring Semester

DEN 202	Dental Hygiene IV	2	12	5
DEN 206	Dental Pharmacology	2	0	2
DEN 210	Dental Materials	2	2	3
DEN 214	Dental Specialties	2	0	2
SOC 110	Introduction to Sociology	3	0	3
		11	14	15

NOTE: Students must have completed a course in CPR (Cardio-Pulmonary Resuscitation) prior to treating patients in the Spring Semester of the Freshman Year.

**CRIMINAL JUSTICE CURRICULUM  
on Page 47**





**Electrical Engineering Technology students learning to use electronic motor controls in the College's Electrical Machines Laboratory.**

## ELECTRICAL ENGINEERING TECHNOLOGY

DEPARTMENT CHAIRMAN, Robert Reid  
Electrical Building, Room 101  
Telephone 771-5017

The Electrical Engineering Technology program at Broome Community College is made up of a planned sequence of college level courses leading to the Associate Degree. Engineering Technology Emphasizes both the theory and application of established scientific and engineering methods and prepares the student for immediate employment or/for transfer to an upper division school upon graduation.

The graduate is prepared to be the interface between the design engineer and skilled craftsman. He/she translates problems into functioning equipment using his/her knowledge of mathematics, physics, linear and digital electronics, microprocessor hardware and software, machines, robotics, process control, circuit analysis, and computer programming languages. He/she does this whether working in a small company as the only technician or in a large company as part of a team.

Graduates work for companies like New York State Electric and Gas,

International Business Machines, Xerox, Eastman Kodak, General Electric, Universal Instruments, Singer-Link, Bell Laboratories, Savin Corporation, Raymond Corporation, Bendix, National Cash Register and Corning Glass.

Starting positions include engineering assistant, technical specialist for electronics, computers, field service, or sales. Starting salaries for graduates averaged \$16,888 in 1983, covering a range from \$24,000 to \$12,600.

Many graduates find that more education is desirable and have successfully completed advanced study at State University of New York Colleges at Binghamton, Utica-Rome, and Buffalo, as well as at Rochester Institute of Technology, Clarkson College of Technology and others.

The program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology TAC/ABET.

### FIRST YEAR Fall Semester

		Hours per Week	Credits
		Class Lab	per Semester
CST 141	Fortran Programming with Graphic Applications .....	2 2	3
EET 111	Electrical Construction Laboratory I .....	1 3	2
EET 121	Electrical Circuits .....	4 3	5
EET 100	Introduction to Electrical Engineering Technology .....	1 0	½
ENG 110	Written Expression I .....	3 0	3
*MAT 141	Algebra and Trigonometry .....	4 0	4
		15 8	17½

### Spring Semester

EET 112	Electrical Construction Laboratory II .....	0 3	1
EET 130	Engineering Drawing .....	0 3	1
EET 150	Electronic Devices .....	4 3	5
EET 162	Computer Aided Network Analysis .....	3 0	3
ENG 150	Technical Writing .....	3 0	3
*MAT 142	Applied Calculus I .....	4 0	4
*MAT 163	Calculus with Analytic Geometry I ...		
		14 9	17

### GRADUATION REQUIREMENT: 70½ CREDITS

\*Students should consult with the department chairman or his designee to determine the appropriate mathematics courses.

### SECOND YEAR Fall Semester

EET 241	Energy Conversions and Control Systems I .....	3	3	4
EET 251	Electronic Circuitry .....	3	3	4
PHY 141	Physics .....	3	2	4
EET 267	Digital Electronics and Microprocessors I .....	3	2	4
	Social Science Elective .....	3	0	3
		15	10	19

### Spring Semester

EET 230	Electronic Design and Fabrication ...	0	3	1
EET 242	Energy Conversions and Control Systems II .....	4	3	5
EET 252	Electronic Systems .....	3	3	4
PHY 144	Physics II-E .....	3	2	4
	Social Science Elective .....	3	0	3
		13	11	17

## ENGINEERING SCIENCE

DEPARTMENT CHAIRMAN, Jack Foster  
Titchener Hall, Room 221  
Telephone 771-5276

### FIRST YEAR Fall Semester

		Hours per Class	Week Lab	Credits per Semester
CHM 145	Chemistry .....	3	3	4
MAT 171	Engineering Calculus with Analytic Geometry I .....	4	0	4
EGR 150	Engineering Graphics .....	1	2	2
PHY 181	Engineering Physics I .....	3	2	4
	English or Literature Elective .....	3	0	3
EGR 100	Orientation .....	2	0	0
		16	7	17

### Spring Semester

CHM 146	Chemistry .....	3	3	4
CST 124	Computer Programming for Engineers .....	2	2	3
MAT 172	Engineering Calculus with Analytic Geometry II .....	4	0	4
PHY 182	Engineering Physics II .....	3	2	4
	English or Literature Elective .....	3	0	3
EGR 100	Orientation .....	2	0	0
		17	7	18

### SECOND YEAR Fall Semester

*EGR 281	Mechanics: Statics .....	3	0	3
EGR 285	Electrical and Electronic Circuits .....	3	0	3
EGR 287	Engineering Science Laboratory I .....	0	3	1
MAT 271	Engineering Calculus with Analytic Geometry III .....	4	0	4
PHY 281	Engineering Physics III .....	4	0	4
PED	Physical Education Elective .....	0	2	1
	Social Science Elective .....	3	0	3
EGR 200	Orientation .....	2	0	0
		19	5	19

### Spring Semester

*EGR 282	Mechanics: Dynamics .....	3	0	3
EGR 286	Engineering Analysis .....	1	0	1
EGR 288	Engineering Science Laboratory II .....	0	3	1
MAT 272	Differential Equations with Linear Algebra .....	4	0	4
EGR 284	Materials Science .....	3	0	3
PED	Physical Education Elective .....	0	2	1
	Social Science Elective .....	3	0	3
EGR 200	Orientation .....	2	0	0
		16	5	16

\*Organic Chemistry (CHM 261 and 262) may be substituted by students who are declared Chemical Engineering majors

**GRADUATION REQUIREMENT: 70 CREDITS**



Engineering Science students conducting an acceleration, velocity, distance, time experiment in one of the College's Physics Laboratories.

The Engineering Science curriculum is designed primarily to prepare graduates to continue their studies in the various engineering disciplines at four-year colleges and universities. The strong emphasis on mathematics and physics also allows graduates to transfer to these majors at four-year institutions, with junior-year standing. In addition, there are immediate employment possibilities for qualified graduates who wish to terminate or postpone further educational goals until a more opportune time.

Broome Community College is a member of the New York State Two-Year/Four-Year Engineering College Curriculum Study Committee. The purpose of this organization is to facilitate the transfer to four-year colleges, with junior-year standing, of two-year college graduates from engineering science programs. Rensselaer Polytechnic Institute (RPI), Clarkson, Rochester Institute of Technology (RIT), Cornell, Syracuse, Union, and State University of New York at Buffalo and at Stony Brook are among the members of the Study Committee who have agreed to accept those two-year college graduates who have been recommended by their Engineering

Science departments. Feedback from these and other institutions to which Broome Community College students transfer indicates a high regard for the graduates and the quality of the Engineering Science program at BCC.

Those graduates who prefer to seek immediate employment will find job opportunities as engineering technicians or as assistants to engineers involved in research and development. In addition, employment opportunities also exist which involve the application of mathematics and computer programming.

The 1983 graduates of this program who went to work averaged starting salaries of \$16,750. These ranged from \$18,500 to \$14,700.

Students entering Broome Community College who wish to continue studying for their bachelor's degrees in engineering, applied mathematics, or physics will find the Engineering Science program the most appropriate course of study. As a reasonable guideline for successful achievement in this rigorous program, a student's course work in high school should be above the 80% level in all areas. (See page 7 for specific requirements).



## CRIMINAL JUSTICE

DEPARTMENT CHAIRMAN, Francis J. Short  
Special Career Programs  
Mechanical Building, Room 214  
Telephone 771-5087

COORDINATOR, William F. Michalek  
Mechanical Building, Room 219, Telephone 771-5029

This program is designed for full-time students desiring employment after two years of study. Careful planning and selection of courses is necessary to complete the program in two years. Consult the Criminal Justice Coordinator for specific details on selection of proper electives. Criminal Justice electives are described on pages 86 and 87, and most Criminal Justice courses are given in the evening.

### FIRST YEAR Fall Semester

			Credits	
			Class	Lab
			per Week	per Semester
ENG	110	Written Expression I .....	3	0
PSY	110	General Psychology .....	3	0
SOC	110	Introduction to Sociology .....	3	0
CRJ	101	Introduction to Criminal Justice .....	3	0
CRJ		Criminal Justice Elective .....	3	0
			15	0

### Spring Semester

SPK	102	Effective Speaking .....	3	0
POS	201	American Political Systems .....	3	0
CRJ		Criminal Justice Elective .....	3	0
CRJ		Criminal Justice Elective .....	3	0
PHI		Elective in Philosophy .....	3	0
			15	0

### SECOND YEAR Fall Semester

		Math/Science Elective .....	3-4	0
PSY		Elective in Psychology .....	3	0
SOC		Elective in Sociology .....	3	0
CRJ		Criminal Justice Elective .....	3	0
CRJ		Criminal Justice Elective .....	3	0
			15-16	0

### Spring Semester

		Math/Science Elective .....	3-4	0
CRJ		Criminal Justice Elective .....	3	0
CRJ		Criminal Justice Elective .....	3	0
		*Free Elective .....	3	0
		*Free Elective .....	3	0
			15-16	0

\*Social Sciences recommended.

## INDIVIDUAL STUDIES

DEPARTMENT CHAIRMAN, Francis J. Short  
Department of Special Career Programs  
Mechanical Building, Room 214  
Telephone 771-5087

To better meet the changing times and to provide an opportunity for students with unusual needs, Broome Community College allows **selected students** the opportunity to take a personally planned degree program. This program requires that the student develop, with an advisor, an "area of concentration." **This area of concentration must be a cohesive body of knowledge which the student can justify as having both educational and personal relevance.**

Completion of the Individual Studies Program can lead to an Associate in Science (AS) or Associate in Applied Science (AAS) degree, depending on the student's area of concentration. The AS degree program is designed for maximum transfer possibilities, and the AAS degree program has better immediate employment opportunities. **Admission into the program requires development of a Plan of Studies which is approved by the department chairman. This plan is developed by the student with a specific educational or career goal in mind.**

### Associate in Science Degree (60 credits)

- 30 Credits in English, Humanities, Natural Sciences, Mathematics and Social Sciences.
- 30 Credits in student's Area of Concentration

### Associate in Applied Science Degree (60 credits)

- Minimum of 20 semester credits in Liberal Arts and Sciences to include:
  - 6 Credits in Humanities (maximum of 3 hours in Speech)
  - 6 Credits in Social Science
  - 8 Credits in Natural and Physical Science, including Mathematics
- 10 Credits of Technical Electives
- 30 Credits in student's Area of Concentration

For additional information contact the Department Chairman.

## DIVISION OF LIBERAL AND GENERAL STUDIES

DIVISION DEAN, George Higginbottom  
Titchener Hall, Room 121  
Telephone 771-5031

The Division of Liberal and General Studies manages a variety of degree programs ranging from traditional Arts and Sciences concentrations, to Mental Health and Retardation, to Special Careers and Individual Studies. It also coordinates the crediting of experiential learning. Following some general information pertaining to academic advisement, each of the programs of the division is listed.

### Academic Advisement

#### FULL-TIME STUDENTS

Every full-time student is assigned a faculty advisor. During the first few weeks of classes, students should meet with their advisors to discuss academic and career plans.

Students are *encouraged* to meet regularly with their advisors thereafter. All students are required to complete in the presence of their advisors a Degree Advisement Contract prior to registering in subsequent semesters.

The divisional office staff is available to deal with special problems relating to academic requirements and transfer. While the faculty and staff will make every reasonable effort to help students with academic planning, students must also assume responsibility for their programs and, particularly, in meeting degree requirements.

#### PART-TIME STUDENTS

Part-time day students who intended to matriculate in a degree program sponsored by the division should come to the office (Room 121 in Titchener Hall) to be assigned academic advisors. Students not interested in a degree, but nevertheless, seeking academic advice, may do so in the Liberal Arts office. Part-time evenings students will be advised by representatives from the Student Academic Advisement Center in Room 111 of The Wales Building.

### Transfer

Students who have earned A.A. or A.S. degrees at Broome Community College and who intend to go on for baccalaureate degrees are guaranteed transfer to a four-year college or university of the State University of New York (SUNY). There is no guarantee, however, that students can complete all degree programs at transfer institutions in four semesters.

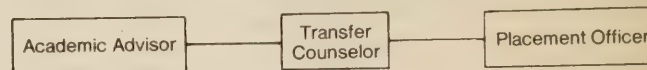
Students are urged to learn as much as they can relative to program requirements at the institution(s) to which they might transfer. For example, many four-year schools require foreign language. The decision to take a language at Broome Community College might thus be influenced by whether or not it is required at the college to which one intends to transfer.

The Liberal and General Studies Division has in force a number of guaranteed transfer arrangements with other public and private colleges. Inquiries about these agreements, some in force and some in progress, should be made in Titchener Hall, Room 121.

### Career Preparation

For a great number of careers a rich background in liberal studies, as is presented in the Associate in Arts (AA) and Associate in Science (AS) degree programs, is essential. Students are urged to utilize the college resources thoroughly, and as early as possible, in locating useful information about their intended academic majors and their career aspirations.

The divisional advisement system is one which aims to match students with advisors who share their interests. If questions pertaining to career preparation, transfer opportunities and job placement cannot be answered by the faculty advisors, students will be directed to somebody who can. Key figures in the advisement picture are:



To start students thinking about a career and the preparation needed, a number of fields which suggest a liberal studies background is listed below. The college does not offer courses in all these areas, and in some cases the professional courses are taught at the junior/senior level in baccalaureate programs.

Advertising  
Architecture  
Art  
Child Care  
Communications  
Community/Human Service  
Computing  
Counseling  
Criminal Justice  
Data Processing  
Design  
Energy Research  
Environmental Affairs  
Foreign Service  
Government Service  
Home Economics  
Interior Design  
International Business  
Labor Relations  
Library Science

Management  
Medicine  
Oceanography  
Optometry  
Personnel  
Public Relations  
Public Service  
Publishing  
Real Estate  
Recreation  
Social Work  
Scientific Research  
Sports Writing  
Teaching  
Technical Writing  
Translating  
Transportation  
Travel/Tourism  
Urban Planning

### Communication With Students

The division maintains Bulletin Boards in the Titchener Hall lobby and outside the office in Titchener Hall, Room 121. Students are urged to check the boards regularly for information pertaining to academic advisement, career planning, cultural events, transfer opportunities, convocations and lectures, concerts, and the like. Important notices and messages for students will also be posted. **Check the boards!**



The Liberal Arts curriculum is mainly a two-year university-parallel program designed especially for those who wish to continue their college education at a four-year school. Graduates of the College in its Liberal Arts program receive either the Associate in Arts or Associate in Science degrees, depending on which course of study they complete.

Students completing this curriculum, its science option or its other emphases will have a breadth of education that prepares them for many professional careers. The Science Option, for example, is excellent for those planning careers in forestry,

chemistry, biology or medicine. Those aspiring to careers in the various professions will find alternatives in the Liberal Arts curriculum designed especially for them.

Students should be aware that many of these alternative curriculums presume a high level of preparation in the secondary school, and they should consult with faculty advisors or counselors when there is doubt about the adequacy of their pre-college academic background.

Prospective academic majors in the humanities, social sciences, biological sciences and physical education are also taught and advised by divisional faculty and staff.

## Associate In Arts Degree

	Credits Required	
English .....	6	I and II; BIO 131-132 Human Biology I and II; CHM 141-142 General Chemistry; CHM 145-146 Chemistry; PHY 161-162 Physics; PHS 113, 114, 115, or 116 Physical Science (any 2).
ENG 110 and 120 Written Expression I and II .....		
History .....	6	Philosophy or Foreign Language Sequence ... 6-8
HIS 100 Rise of the West or HIS 115 Modern Global History plus one other history (HIS) course. ....		Students are encouraged to take both, but they must complete a year (6-8 credits) of philosophy or a foreign language sequence.
Mathematics or elective (as advised) .....	0-8	Physical Education .....
Students who have completed fewer than 3 units of secondary school mathematics (through Intermediate Algebra or "Course II") are required to take a minimum of 2 semesters of college level mathematics.		No more than 2 credits can be used to fulfill degree requirements.
Students who have completed 3 units of secondary school mathematics (through Intermediate Algebra or "Course III") are required to take one semester of college level mathematics.		Literature .....
Students who have completed more than 3 units of secondary school mathematics (including Intermediate Algebra or "Course III") are not required to take additional mathematics. They may, however, elect an appropriate math course or an elective in another field.		Any 2 LIT courses.
Laboratory Science .....	8	Social Science .....
A full-year sequence of biology, chemistry, physics or physical science. Acceptable sequences: BIO 111-112 General Biology		Any 2 courses from the following disciplines—anthropology, economics, geography, political science, psychology, sociology, social sciences. These have ANT, ECO, GEO, POS, PSY, SOC, SOS designators.
		Electives .....
		Selections from approved listing preceding each semester's registration. Exceptions to receive approval of Dean of the LA Division...
		Total number of credits .....
		64 minimum

## Associate In Science Degree Science Option

This program is designed for students planning careers in forest biology, forest chemistry, chemistry, biology, medicine, dentistry and related fields.

### FIRST YEAR

	Credits Required Per Year
English .....	6
ENG 110 and ENG 120 Written Expression I and II .....	
History .....	6
HIS 110 The Rise of the West or HIS 115 Modern Global History and any other history (HIS) course. ....	
Mathematics .....	8
MAT 163 and MAT 164 Calculus with Analytic Geometry I and II or if a student is not prepared for these courses, he or she may take MAT 139 Algebra or MAT 140 Trigonometry or MAT 161 Pre-Calculus Mathematics first.	
2 Laboratory Science Sequences .....	16
BIO 111 and BIO 112 General Biology I and II and CHM 145 and CHM 146 Chemistry for those planning careers in medicine, veterinary medicine, dentistry, forest biology, marine biology, pharmacy or forest chemistry.	
Physical Education .....	2
Any 2 PED courses. (no more than 2 credits)	

### SECOND YEAR

Literature .....	6
Any 2 LIT courses	
Social Science .....	6
Any 2 courses from the following disciplines—anthropology, economics, geography, political science, psychology, sociology, social science. These have ANT, ECO, GEO, POS, PSY, SOC and SOS designators.	
2 Laboratory Science sequences .....	16
PHY 161 and 162 Physics and CHM 245 and 246 Organic Chemistry for those planning careers in medicine, veterinary medicine, dentistry, forest biology, marine biology, pharmacy or forest chemistry.	
Mathematics, Philosophy or Foreign Language .....	6
A student must fulfill the mathematics requirement before he or she can take a philosophy or foreign language course. If a student did not complete MAT 164 Calculus with Analytic Geometry II as a freshman, but instead took the other Mathematics courses listed above, then MAT 163 and MAT 164 should be taken now. If the student wishes to take a math course more advanced than MAT 164 and he or she has completed MAT 164, then he or she may take another mathematics course now. If the math requirement has been completed and the student does not elect to take additional mathematics, then he or she is required to take any philosophy or foreign language courses.	
Total number of credits .....	72 minimum

# MODEL PROGRAMS for Liberal Arts and Sciences

## Minimum Credit—64

### (All Earn Associate In Arts Degree)

The selection and arrangement of courses in these models reflect the following considerations:

- 1—similar programs at four-year colleges to which many BCC students transfer.
- 2—exposure to basic courses in these academic major or career areas.
- 3—completion of prerequisite courses in the first year.
- 4—requirements under the Associate in Arts degree.

**Note:** Students planning careers or majors in dentistry, medicine, forest biology or chemistry, and other science areas should refer to the Associate in Science degree "Science Option" display on page 49.

### THESE MODELS ARE GUIDES AND ARE FLEXIBLE.

Students with advanced placement credit and those with 3½ units of academic mathematics will be able to take additional elective courses with their advisors' approval.

Students who enter with academic deficiencies may have to take more than the minimum 64 credits to earn the Associate in Arts degree.

**64 credits required for AA degree. The following Model Programs suggest how courses could be arranged to acquire these credits.**

ART				DESIGN ARTS			
FIRST YEAR Courses (Credits)		SECOND YEAR Courses (Credits)		FIRST YEAR Courses (Credits)		SECOND YEAR Courses (Credits)	
ENG 110 and 120	(6)	LIT electives	(6)	ENG 110 and 120	(3)	Laboratory Science	
HIS 100	(3)	HIS electives	(3)	HIS 110 and HIS elective	(6)	sequence	(8)
MAT electives	(0-8)	Laboratory Science		MAT electives	(0-8)	LIT electives	(6)
Philosophy or Foreign Language	(6-8)	Sequence	(6)	Philosophy or Foreign Language	(6-8)	Social Science electives	(6)
*PHI 111 and 112		Social Science electives	(6)	*PHI 111 and 112		*PSY 110	
ART electives	(12)	ART electives	(9)	Design electives	(6)	Design electives	(12)
*ART 115, 101		*ART 215, 216		*ART 105		*INT 110	
*ART 116, 140		*ART 105 or 106		*INT 101		*INT 115	
		Physical Education electives (2)		Physical Education electives (2)		*CIV 159	
						*ART 106	
Total	33	Total	34	Total	32	Total	32
VISUAL ARTS				CHILD CARE			
FIRST YEAR Courses (Credits)		SECOND YEAR Courses (Credits)		FIRST YEAR Courses (Credits)		SECOND YEAR Courses (Credits)	
ENG 110 and 120	(6)	Laboratory Science		ENG 110 and 120	(6)	HIS 110 and HIS elective	(6)
MAT elective	(6)	sequence	(8)	MAT electives	(0-8)	Philosophy or Foreign Language	(6-8)
Philosophy or Foreign Language	(6-8)	LIT electives	(6)	Laboratory Science		LIT electives	(6)
HIS 100 and HIS elective	(6)	Social Science electives	(6)	*BIO 131 and 132		*LIT 263	
Physical Education electives (2)		Visual Arts electives	(12)	Social Science	(6)	Child Care electives	(9)
Visual Arts electives	(6)	*ART 101		*PSY 110		Free electives	(6)
*COM 200		*ART 105, 106		*SOC 110		*PSY electives	
*COM 110		*COM 203		Child Care electives	(6)	*THR or MUS electives	
				*CDC 100			
Total	32	Total	32	Physical Education electives (2)			
				Total	34	Total	33
FOREST TECHNOLOGY				CYTOTECHNOLOGY			
(NY State Ranger School—Wanakena)				(For Transfer to Upstate Medical Center)			
Requires concurrent application—to B.C.C. and Wanakena				"B" grades in science courses required			
FIRST YEAR Courses (Credits)		SECOND YEAR Courses (Credits)		FIRST YEAR Courses (Credits)		SECOND YEAR Courses (Credits)	
ENG 110 and 120	(6)			ENG 110 and 120	(6)	BIO 131 and 132 (opt.)	(8)
MAT 139 and 140	(8)			BIO 111 and 112	(8)	LIT electives	(6)
ECO 110 or 111	(3)			CHM 145 and 146	(8)	BIO 150	(4)
BIO 111 and 112	(8)			MAT 124	(3)	Social Science electives	(6)
Electives	(6)			HIS 100 and HIS elective	(6)	Philosophy or Foreign Language	(6-8)
*BIO electives				Physical Education electives (2)		Elective	(3)
Total	31			Total	33	Total	33

### COMMUNICATIONS AND MEDIA

FIRST YEAR Courses (Credits)		SECOND YEAR Courses (Credits)	
ENG 110 and 120	(6)	Laboratory Science	
HIS 110 and HIS elective	(6)	sequence	(8)
Philosophy or Foreign Language	(6-8)	LIT electives	(6)
MAT electives	(0-8)	Social Science electives	(6)
Physical Education electives (2)		*PSY 110	
Communications/Media courses	(6)	*SOC 110	
*COM 100		Communications/Media courses	(12)
*COM 120		*COM 203	
*COM 200		*COM 110	
		*ENG 163	
		*SPK 102	
Total	32	Total	32

### CIVIL AND PUBLIC SERVICE

FIRST YEAR Courses (Credits)		SECOND YEAR Courses (Credits)	
ENG 100 and 120	(6)	LIT electives	(6)
HIS 100 and HIS elective	(6)	Philosophy elective	(3)
*HIS 131		*PHI 206	
Philosophy or Foreign Language	(3-4)	Social Science elective	(3)
MAT electives	(0-6)	*POS 204	
*MAT 124		Related electives	(20)
Laboratory Science		ECO 104, 110, 111	
sequence	(8)	PSY 110	
Social Science elective	(3)	SOC 110, 111	
*POS 201		BUS 100	
Physical Education electives (2)		BUS 245, 257	
Total	32	Total	32

### ELEMENTARY EDUCATION

FIRST YEAR Courses (Credits)		SECOND YEAR Courses (Credits)	
ENG 110 and 120	(6)	LIT electives	(6)
HIS 100 and HIS elective	(6)	*LIT 263	
MAT 119 and 120	(6)	Social Science electives	(6)
Laboratory Science		*PSY 110	
sequence	(8)	*SOC 110	
Philosophy or Foreign Language	(6-8)	*GEO 110	
Physical Education electives (1)		Physical Education electives (1)	
		Electives	(18)
		*PSY 211	
		*ART electives	
		*MUS electives	
		*PSY 212, 227	
		*ANT 111	
Total	33	Total	31

### MEDICAL TECHNOLOGY (For Transfer to Upstate Medical Center "B" grades in science courses required)

FIRST YEAR Courses (Credits)		SECOND YEAR Courses (Credits)	
ENG 110 and 120	(6)	BIO 131	(4)
BIO 111 and 112	(8)	BIO 150	(4)
CHM 145 and 146	(8)	CHM 245	(5)
MAT 141 or equivalent	(4)	PHY 161	(4)
HIS 100 and HIS elective	(6)	Philosophy or Foreign Language	(3-4)
Philosophy or Foreign Language	(3-4)	Social Science electives	(6)
Physical Education electives (1)		CHM 224	(4)
		LIT electives	(6)
		Physical Education electives (1)	
Total	36	Total	36

\*THESE COURSES ARE "STRONGLY RECOMMENDED"  
†THESE COURSES ARE "RECOMMENDED"



### CRIMINAL JUSTICE

FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
ENG 110 and 120 (6)	Laboratory Science (8)
HIS 100 and HIS elective (6)	sequence (8)
MAT electives (0-8)	*CHM 120 and 121
†MAT 117	Philosophy or Foreign Language (6-8)
*Mat 124	LIT electives (6)
Social Science electives (6)	Criminal Justice electives (9)
*PSY 110 and SOC 110	Free electives (3)
Criminal Justice electives (6)	*SOC 210
*CRJ 100	
Physical Education electives (2)	
Total 32	Total 32

### FOREST MANAGEMENT

FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
ENG 110 and 120 (6)	Philosophy or Foreign Language (6-8)
HIS 100 and HIS elective (6)	LIT electives (6)
MAT electives (0-8)	Social Science electives (6)
*MAT 163, 164	*ECO 110 and 111
Laboratory Science sequence (8)	Laboratory Science sequence (8)
*BIO 111 and 112	*PHY 161, 162
Physical Education electives (2)	Free electives (6)
Electives (8)	†PSY 110, SOC 110, 111
*CHM 145 and 146	*POS 201 or 204
Total 36	Total 32

### JOURNALISM

FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
ENG 110 and 120 (6)	Laboratory Science sequence (8)
HIS 100 and HIS elective (6)	LIT electives (6)
MAT electives (0-8)	Social Science electives (6)
Philosophy or Foreign Language (6-8)	Journalism electives (12)
*Foreign Language	*ENG 164
Physical Education electives (2)	*ENG 165
Journalism electives (6)	†COM 110
*ENG 163	†SPK 102
*COM 100	†COM 120, 121
Total 32	Total 32

### PHYSICAL THERAPY

(For Transfer to Upstate Medical Center  
"B" grades in all required courses)

FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
ENG 110 and 120 (6)	PHY 161 and 162 (8)
MAT 161	PSY 110 and 211 (6)
(163 recommended)	SOC 110 (3)
BIO 111 and 112 (8)	HIS elective (3)
CHM 145 and 146 (8)	Philosophy or Foreign Language (6-8)
HIS 100 and HIS elective (6)	LIT electives (6)
	Physical Education electives (2)
Total 32	Total 34

### THEATER

FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
ENG 100 and 120 (6)	Laboratory Science sequence (8)
HIS 100 and HIS elective (6)	LIT electives (6)
MAT electives (0-6)	*LIT 230, 233
Philosophy or Foreign Language (6-8)	Social Science electives (6)
Physical Education electives (2)	†PSY 110
Theater electives (6)	Theater electives (12)
*THR 190	*THR 190
*THR 111, 112	*THR electives
*THR 221	
Total 32	Total 32

### LANDSCAPE ARCHITECTURE

FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
ENG 110 and 120 (6)	LIT electives (6)
HIS 100 and HIS elective (6)	Social Science electives (6)
MAT electives (0-8)	Philosophy or Foreign Language (3-4)
*MAT 139, 140	Related courses (18)
Laboratory Science sequence (8)	*CIV 115
*BIO 111, 112	*CIV 111
Philosophy or Foreign Language (3-4)	*CST 110
Physical Education electives (2)	*PHS 116
	†PHY 161
	†MAT 163, 164
	†INT 101
Total 32	Total 32

### MUSIC

FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
ENG 110 and 120 (6)	Laboratory Science sequence (8)
HIS 100 and HIS elective (6)	LIT electives (6)
MAT electives (0-6)	Social Science electives (6)
Philosophy or Foreign Language (6-8)	†ANT 111
†Italian or	Electives (12)
†PHI 111, 112	*MUS 191
Physical Education electives (2)	*MUS 106
Mus electives (7)	
*MUS 191	
*MUS 101	
*MUS 105	
Total 32	Total 32

### SPECIAL EDUCATION

FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
ENG 110 and 120 (6)	LIT electives (6)
HIS 100 and HIS elective (6)	Philosophy or Foreign Language (3-4)
MAT electives (6)	Social Science elective (3)
*MAT 113, 119	*PSY
Laboratory Science sequence (8)	Physical Education electives (2)
*BIO 131, 132	Related electives (18)
Social Science elective (3)	*PSY electives
*PSY 110	*MUS, THR, ART
Philosophy or Foreign Language (3-4)	*HUS 120
Total 32	Total 32

### BUSINESS

(For Transfer to Baccalaureate Programs in Business)  
This model is appropriate for transfer to  
SUNY Binghamton School of Management

FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
ENG 110 and 120 (6)	LIT electives (6)
HIS 100 and HIS elective (6)	Laboratory Science sequence (8)
*MAT 124 and 146	ECO 110 and 111 (6)
or 163	Business electives (6)
Philosophy or Foreign Language (6-8)	*BUS 100 and 101 (8)
Physical Education electives (2)	*BUS 245 or 257 (3)
Business electives (3)	†CST 100, 110, 118, 120 (1-3)
*BUS 110	
*BUS 118	
Total 32-34	Total 34

\*THESE COURSES ARE "STRONGLY RECOMMENDED"

†THESE COURSES ARE "RECOMMENDED"

### MUSEUM CAREERS

FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
ENG 110 and 120 (6)	HIS elective (3)
HIS 100 (3)	Laboratory Science sequence (8)
MAT electives (0-6)	LIT electives (6)
*MAT 124	Social Science electives (6)
Philosophy or Foreign Language (6-8)	*ANT 110/111
*Foreign Language	†PSY 110
Physical Education electives (2)	†SOC 110
Electives (7-10)	Electives (9)
*ART 101, 105	*INT 101, *ART 106
*PHI 111/112	†BUS 100, †ECO 110
Total 32	Total 32

### PHYSICAL EDUCATION/RECREATION

FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
ENG 110 and 120 (6)	LIT electives (6)
HIS 100 and HIS elective (6)	Social Science electives (6)
MAT electives (0-6)	*PHY 110
Philosophy or Foreign Language (6-8)	*PSY 211 or 212
PED 132 (2)	Laboratory Science sequence (8)
Related electives (0-6)	*BIO 131, 132
*PSY 110	Related electives (12)
*ART, MUS, THR, SPK	
Total 32	Total 32

### PRE-LAW

FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
ENG 110 and 120 (6)	LIT electives (6)
HIS 100 and HIS elective (6)	Social Science electives (6)
MAT electives (0-8)	Electives (18)
Laboratory Science sequence (8)	POS 201, 204
Foreign Language or Philosophy (6-8)	ECO 110, 111, 104
	SOC 110, 111
	HIS 130, 131
	PSY 110
	BUS 100
	PHI 201, 206, 202
	ART, MUS, THR
	Physical Education electives (2)
Total 32	Total 32

### PUBLIC HISTORY

FIRST YEAR Courses (Credits)	SECOND YEAR Courses (Credits)
ENG 110 and 120 (6)	LIT electives (6)
HIS 100 and 131 (6)	*LIT 210, 211, 230
MAT electives (0-8)	Social Science electives (6)
*MAT 124	*POS 201, 204
Philosophy or Foreign Language (6-8)	*PSY 110, SOC 110
Physical Education electives (2)	Laboratory Science sequence (8)
Electives (3-9)	Electives (12)
*HIS 175	*SOC 120
*POS 201	*HIS 130, 170, 180
*POS 204	*SOS 120, 130
	†ECO 110, 111
Total 32	Total 32

### 1 + 1 PROGRAMS

DELHI A&T	General Agriculture	WANAKENA	See Forest Technology Model Program
CANTON A&T	Dairy & Food Service Mortuary Science	PAUL SMITHS COLLEGE	Hotel Management
Details in Titchener Hall, Room 121			

## Mental Health & Retardation Emphasis (Social Work) (Associate in Science Degree)

COORDINATOR, Charles Croll  
Room 205, Y Building Telephone 771-5110

This course of study is mainly for students who wish to transfer to upper division degree programs in mental health and human services, and for those already in entry level positions in appropriate public and private agencies. Broad preparation during the first year is followed by greater concentration during the second year.

The number of students permitted to enter the second year of the program is limited by the availability of field placement openings in local agencies. Selection will take place during the spring semester of the Freshman year. Students who do not qualify can still complete A.A. degree requirements within the normal two-year period. For further details inquire at the Liberal Arts Division office in Titchener Hall (Room 121).

FIRST YEAR Fall Semester			Credits
ENG	110	Written Expression I .....	3
MAT		(MAT 124 Statistics recommended) .....	3-4
HIS	100	Rise of the West .....	3
		Laboratory Science (BIO 131 Human Biology I recommended) .....	4
PSY	110	General Psychology .....	3
PED		Physical Education Elective .....	1
			17-18

Spring Semester			Credits
ENG	120	Written Expression II .....	3
SOC	110	Introduction to Sociology .....	3
		Laboratory Science (BIO 132 Human Biology II recommended) .....	4
HIS	186	Modern American Social History .....	3
		Liberal Arts Elective or Mathematics .....	3
PED		Physical Education Elective .....	1
			17

SECOND YEAR Fall Semester			Credits
PSY	223	Intelligence and the Mentally Retarded .....	3
PSY	217	Counseling and Interviewing .....	3
		English or Humanities Elective .....	3
SOS	288	Seminar in Community Social Service Organizations .....	3
		†Liberal Arts Elective .....	3
			15

Spring Semester			Credits
PSY	227	Behavior Modification .....	3
PSY	214	Abnormal Psychology .....	3
		†Liberal Arts Elective .....	3
SOS	290	Social Science Field Work* .....	3
PHI		Philosophy elective .....	3
			15

\*This internship experience generally involves 6 hours a week in such agencies as Binghamton Psychiatric Center, Broome Developmental Center, Association for Retarded Children, Broome County Social Services, Broome County Office for the Aging, PROBE, Planned Parenthood, Wilson Memorial Hospital Extended Care.

†Students receiving credit for SOS 150 Introduction to Human Service Work may be able to use those credits for 6 of the 12 required in the program from Liberal Arts electives. These electives may not be used in any other program.

**NOTE**—Students interested in an emphasis in Social Work may substitute sociology or other approved electives.

## LIBERAL AND GENERAL STUDIES

### SPECIAL CAREER PROGRAMS

DEPARTMENT CHAIRMAN, Francis J. Short  
Mechanical Building, Room 214  
Telephone 771-5087

**CHILD CARE**  
Coordinator, Marilyn J. Schafer  
Mechanical Building, Room 219  
Telephone 771-5029  
Page 38

**CRIMINAL JUSTICE**  
Coordinator William F. Michalek  
Mechanical Building, Room 219  
Telephone 771-5029  
Page 47

**FIRE PROTECTION TECHNOLOGY**  
Coordinator, Anthony J. Winkler  
Mechanical Building, Room 214  
Telephone 771-5094  
Page 66

**INDUSTRIAL SAFETY AND  
OCCUPATIONAL HYGIENE**  
Coordinator, Francis J. Short  
Mechanical Building, Room 214  
Telephone 771-5087  
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**PARALEGAL ASSISTANT**  
Coordinator, Matthew A. Vitanza  
Mechanical Building, Room 214  
Telephone 771-5094  
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**INDIVIDUAL STUDIES**  
Coordinator, Francis J. Short  
Mechanical Building, Room 214  
Telephone 771-5087  
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### MARKETING PROGRAMS

**Leading to Associate in Applied  
Science Degree on Page 36**



DEPARTMENT CHAIRMAN, Appointment Pending  
Mechanical Building, Room 117  
Telephone 771-5023

The continuing thrust for faster and more economical manufacturing methods, more reliable systems and the need for new, clean and consistent sources of energy has generated an increased demand for mechanical engineering technicians with a high degree of technical competence.

The curriculum outline of courses encompasses a blend of mathematics, science, English, social science and technical specialties conceived to generate the necessary background for a variety of entry positions in Mechanical Engineering Technology. These entry positions usually align closely with and support mechanical engineering or related functions.

Recent graduates have been employed in areas of design-drafting, product design, quality control, metallurgy, heat-power, purchasing, sales, technical writing, system

maintenance and computer-aided design. Job opportunities exist both locally and nationally, and starting salaries for 1983 graduates ranged between \$22,000 and \$10,318 with an average of \$16,202.

Mechanical Engineering Technology is a particularly lucrative field for the female. Although few have ventured into the field, those who have are highly successful.

This curriculum is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

State University of NY at Binghamton offers an ABET-accredited Bachelor of Technology program, for which the normal admission requirement is an AAS degree in an engineering technology discipline such as Mechanical Engineering Technology.



Students working on problems in the College's CAD/CAM Center (Computer Aided Design/Computer Aided Manufacturing).

## FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
MET	110	Introduction to Technologies.....	1	0	1/2
*MAT	141	Algebra and Trigonometry.....	4	0	4
MET	115	Engineering Graphics.....	1	2	2
MET	121	Manufacturing Processes I.....	2	2	3
PHY	141	Physics.....	3	2	4
ENG	110	Written Expression 1.....	3	0	3
		Social Science Elective.....	3	0	3
			17	6	19-1/2

## Spring Semester

*MAT	142	Applied Calculus 1.....	4	0	4
CST	122	Scientific Computer Programming - FORTRAN.....	2	2	3
MET	122	Manufacturing Processes II.....	1	3	2
MET	132	Applied Mechanics.....	4	0	4
PHY	142	Physics.....	3	2	4
ENG	150	Technical Writing.....	3	0	3
			17	7	20

## SECOND YEAR Fall Semester

CAD	200	Introduction to Computer Graphics.....	2	4	3
EET	183	Electricity.....	2	3	3
MET	235	Strength of Materials.....	2	3	3
MET	241	Fluid Mechanics and Thermodynamics.....	2	3	3
MET	261	Engineering Statics, Quality Control and Reliability.....	2	2	3
		Social Science Elective.....	3	0	3
			13	15	18

## Spring Semester

EET	186	Electronics.....	2	3	3
MET	238	Mechanical Design.....	3	3	4
MET	252	Engineering Materials and Industrial Processes.....	3	3	4
MET	244	Thermodynamics.....	2	3	3
		† Technical Elective.....	(2-3)	(2-0)	(3)
			10-13	12-14	14-17

\*Or MAT 163-164 Calculus with Analytic Geometry I and II.

† Waiver of the elective is possible only with the approval of the Department Chairperson. It is not a degree requirement.

**GRADUATION REQUIREMENT: 71 1/2 CREDITS**

## MEDICAL ASSISTANT

DEPARTMENT CHAIRPERSON, Mary Schum  
Cecil C. Tyrrell Library, 2nd Floor, Room 210  
Telephone 771-5128

A Medical Assistant is one of the most versatile of all the allied health professionals. There is a variety of job opportunities available for individuals with associate degrees. These are in physicians' offices, medical centers, clinics, hospitals, armed services, laboratories and pharmaceutical companies. One can also find employment in public, industrial, school, and correctional health departments, as well as in the fields of research, publishing and teaching. A medical assistant can continue education in such fields as allied health services, health care management, and teaching. The program is designed to enable graduates to do both administrative assisting and clinical/laboratory assisting.

By studying such specifically related subjects as medical assisting procedures, clinical laboratory procedures and human biology, students can acquire the knowledge and techniques to prepare patients for examinations and assist the physician. These courses also prepare them to perform not only routine medical procedures but also electrocardiography, audiography, urinalysis and hematological tests.

Courses in medical terminology, typewriting, transcription and medical office management prepare the student to conduct the business and administrative duties. English, social sciences, psychology and medical law are included to provide a general background.

Directed Practice supplements the campus segment of the curriculum as senior students participate in an externship program that requires a working experience in physicians' offices or other health care facilities.

The curriculum is accredited by the Committee on Allied Health Education and Accreditation in collaboration with the American Medical Association (AMA) and the American Association of Medical Assistants (AAMA). Graduates are awarded the Associate in Applied Science degree and may elect to take an examination given by the AAMA to become Certified Medical Assistants. This CMA status is recognized throughout the country and can lead to better job opportunities and higher salaries.

Starting salaries of graduates of the program in 1983 averaged over \$8,303 and ranged between \$10,920 and \$6,700, and fringe benefits often include free medical care including medications.

### FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
MDA	102	Medical Assisting Science	2	0	2
MDA	114	Standard First Aid and Personal Safety; Management of Emergencies	0	2	1
MRT	105	Medical Terminology	2	0	2
*SEC	101	or 102 Typewriting	2	3	3
†HSV	101	Cardio-Pulmonary Resuscitation	0	1	1/2
			12	8	15 1/2

\*Based on placement test

†This course will average out to one hour per week over the semester, but it will probably be given in clusters of 3 hours each in the evening or of 7 1/2 hours each on Saturday to make a total of 15 hours.

### Spring Semester

BIO	132	Human Biology II	3	2	4
MDA	115	Medical Assisting Procedures	3	2	4
MDA	106	Medical Correspondence and Communications	0	4	2
MRT	115	Medical Terminology	2	0	2
SPK	102	Effective Speaking or	3	0	3
ENG	120	Written Expression II			
			11	8	15

### SECOND YEAR Fall Semester

CST	105	Understanding Computers	2	2	3
MDA	206	Medical Office Management	3	3	4
MDA	208	Medical Law, Ethics and Economics	3	0	3
#MDA	211	Medical Assisting Procedures	2	4	4
PSY	110	Psychology	3	0	3
			13	9	17

### Spring Semester

MDA	201	Medical Assisting Procedures	2	4	4
MDA	245	Directed Practice	1	16	5
MDA	210	Pharmacology	2	0	2
SOC	110	Introduction to Sociology	3	0	3
			8	20	14

#It is strongly recommended that this course be taken the semester before MDA 245 Directed Practice.





Medical Laboratory Technology Students performing an experiment in the Hematology Laboratory on campus.

DEPARTMENT CHAIRPERSON, Julia Peacock  
901 Front Street  
Telephone 771-5151

The demand for medical laboratory technicians continues, with the majority finding employment in hospital clinical laboratories and in analytical, control and research laboratories of chemical and pharmaceutical companies. Others are employed as research assistants at large universities and still others have continued their higher education toward the baccalaureate in this field at a four-year college or university.

To provide the background necessary for work in these areas, the program includes courses in chemistry, anatomy and physiology, microbiology, urinalysis, immunology, bloodbanking and hematology.

Extensive laboratory work in bio-analytical procedures, chemical instrumentation, microbiological and serological techniques and microscope helps to develop the skill needed for a wide range of job opportunities.

Work in the sciences is balanced by a program in general education including social sciences, English, and mathematics.

Satisfactory completion of 12 weeks of summer clinic experience is required. While there is no salary or direct credit associated with this experience, it is a vital and integral part of the students' educational experience.

Graduates of this program have been successful in finding employment in hospitals and industry or in transferring to 4-year colleges in recent years.

This program is accredited by the Committee on Allied Health Education and Accreditation (CAHEA) as recommended by The National Accrediting Agency for Clinical Laboratory Science (NAACLS).

## MEDICAL LABORATORY TECHNOLOGY

### FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BIO	131	Human Biology I .....	3	2	4
CHM	131	Chemistry .....	3	3	4
ENG	110	Written Expression I .....	3	0	3
MAT	124	Statistics .....	3	0	3
MLT	111	Introduction to Clinical Laboratory Methods and Practices .....	1	2	2
†HSV	101	Cardio-Pulmonary Resuscitation ....	0	1	½
			13	8	16½

†This course will average out to one hour per week over the semester, but it will probably be given in clusters of 3 hours each in the evening or of 7½ hours each on Saturday to make a total of 15 hours.

### Spring Semester

BIO	132	Human Biology II .....	3	2	4
BIO	150	Microbiology I .....	3	3	4
CHM	132	Chemistry .....	3	3	4
MLT	112	Hematology .....	2	4	3
ENG	120	Written Expression II or .....	3	0	3
SPK	102	Effective Speaking .....			
			14	12	18

### Summer Term

\* Summer Clinical Laboratory of 4 weeks

### SECOND YEAR Fall Semester

CHM	221	Organic Chemistry .....	2	3	3
MLT	211	Clinical Chemistry I .....	2	6	4
MLT	251	Diagnostic Microbiology .....	3	4	4
PHY	117	Physics .....	2	2	3
		Social Science Elective .....	3	0	3
			12	15	17

### Spring Semester

CHM	222	Organic Chemistry .....	2	3	3
CHM	224	Instrumental Analysis .....	2	6	4
MLT	212	Clinical Chemistry II .....	2	6	4
MLT	232	Immunology and Immunohematology .....	3	2	4
		Social Science Elective .....	3	0	3
		(ECO 107 Medical Economics and Law recommended)			
			12	17	18

### Summer Term

\* Summer Clinical Laboratory of 8 weeks.

\*Satisfactory completion of Summer Clinical Laboratory experience is **REQUIRED FOR GRADUATION.**

A medical record is the permanent report of a person's illness or injury kept to preserve information of medical, scientific and legal value. The record includes all medical reports which describe how the patient's illness was diagnosed and treated. Medical records are needed to help doctors diagnose and treat future illness, to verify insurance claims, to plan hospitals, to inform the public health officials, and to aid researchers.

The medical record technician works in the medical record department of a hospital, clinic, nursing home, school of veterinary medicine or other health facility and is responsible for many aspects of preparing, analyzing and preserving health information needed by the patients, by the hospital and by the public. The duties include reviewing medical records for completeness and accuracy and also translating diseases and operations into the proper coding symbols.

Other duties include filing medical records, preparing records for micro-filming, typing reports of operations, X-rays and laboratory examinations, as well as histories, physical examinations and discharge summaries, compiling statistics of many

kinds, assisting the medical staff by preparing special studies and tabulating data from records for research. Supervising the day-to-day operation of a medical record department, taking records to court and maintaining the flow of health information are also parts of the total work picture.

Practice in the college medical record laboratory as well as in medical record departments of cooperating hospitals and other health care facilities, either within or outside the area, provides opportunities for additional educational experience which is the vital core of the program.

This curriculum is accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association and by the American Medical Record Association. Students in this program are eligible to take the Medical Record Accreditation Examination following graduation and upon completion receive the title of Accredited Record Technician (ART). Salaries for 1983 graduates ranged from \$10,816 to \$8,500 with an average of \$9,475. Graduates can continue medical record education toward a baccalaureate degree at four-year colleges.



Medical Record Technology students entering data into the microfiche reader-printer in the campus model of a Medical Record Department.

DEPARTMENT CHAIRPERSON, Mary Rosato  
Business Building, Room 031  
Telephone 771-5051

## FIRST YEAR Fall Semester

		Hours per Class	Week Lab	Credits per Semester
BIO 131	Human Biology I.....	3	2	4
ENG 110	Written Expression I.....	3	0	3
MRT 101	Medical Record Science.....	2	2	3
MRT 105	Medical Terminology .....	2	0	2
SEC 101	A, B Typewriting (Each is a 5-week course) .....	2	3	2
SOC	Social Science Elective .....	3	0	3
†HSV 101	Cardio-Pulmonary Resuscitation ....	0	1	½
		15	8	17½

†This course averages out to one laboratory hour per week over the entire semester, but it will probably be given in clusters of 3 hours each in the evening or of 7½ hours each on Saturday to make a total of 15 hours.

## Spring Semester

BIO 132	Human Biology II .....	3	2	4
MRT 107	Medical Transcription .....	0	4	2
MRT 110	Medical Record Science.....	2	4	4
MRT 115	Medical Terminology .....	2	0	2
SPK 102	Effective Speaking .....	3	0	3
SOC	Social Science Elective .....	3	0	3
		13	10	18

## Summer Term

\*MRT 144 Directed Practice .... 40 Hours per week for 4 weeks—4 Credits

## SECOND YEAR Fall Semester

CST 110	Introduction to Data Processing .....	3	0	3
BIO 140	Pathophysiology .....	3	0	3
MRT 202	Medical Record Science.....	2	2	3
MRT 208	Advanced Medical Transcription ....	1	2	2
MRT 236	Quality Assurance .....	1	2	2
		10	6	13

## Spring Semester

MRT 210	Medical Record Science.....	2	2	3
*MRT 245	Directed Practice.....	0	16	4
MRT 295	Medical Record Seminar .....	2	0	2
MRT 222	Medical Legal Aspects.....	3	0	3
MRT 216	Clinical Practicum .....	0	2	1
		7	20	13

## \*GRADUATION REQUIREMENT



## NURSING

DEPARTMENT CHAIRPERSON, Janet H. Wright  
901 Front Street  
Telephone 771-5060

Broome Community College offers a two-year, college-based curriculum to prepare graduates for immediate entrance into the first level of registered nursing. Graduates of this curriculum are eligible to take the New York State licensing examination for registered nurses. They are qualified for immediate employment in bedside nursing care, or they may wish to continue their education for the baccalaureate and higher degrees in the nursing field. The 1983 graduates of this program averaged \$14,749 in their starting salaries, which ranged from \$19,760 to \$9,036.

The curriculum operates as a college program, with classes and

laboratories held on the campus. Clinical instruction is in the cooperating hospitals of the Triple Cities. The clinical experiences, which are an integral part of the Nursing curriculum, include caring for individuals in all age groups, as well as observation periods in community health and welfare agencies.

Enrollment in the Nursing curriculum requires that each student have a completed health form submitted to the Department Chairperson prior to the first clinical assignment.

Mature men and women are encouraged to enter this program along with recent high school graduates, whether they are married or single.

This program is accredited by the National League for Nursing.

### FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
*ADN	100	Meeting Basic Human Needs .....	5	6	7
BIO	131	Human Biology I .....	3	2	4
ENG	110	Written Expression I .....	3	0	3
PSY	110	General Psychology .....	3	0	3
†HSV	101	Cardio-Pulmonary Resuscitation ....	0	1	½
			14	9	17½

†This course will average out to one hour per week over the semester, but it will probably be given in clusters of 3 hours each in the evening or of 7½ hours each on Saturday to make a total of 15 hours.

### Spring Semester

*ADN	101	Nursing Care During the Life Cycle .....	5	6	7
ADN	298	Nursing Seminar III .....	1	0	0
BIO	132	Human Biology II .....	3	2	4
ENG	120	Written Expression II .....	3	0	3
SOC	110	Introduction to Sociology .....	3	0	3
			15	8	17

### SECOND YEAR Fall Semester

*ADN	203	Immobility Concepts .....	3	4½	4
*ADN	204	Regulatory Concepts .....	3	4½	4
*ADN	205	Psychological Concepts I .....	1	3	2
ADN	296	Nursing Seminar I .....	0	2	1
ADN	298	Nursing Seminar III .....	1	0	0
BIO	150	Microbiology I .....	3	3	4
		Free Elective .....	3	0	3
			14	17	18

### Spring Semester

*ADN	206	I, I and O Concepts .....	3	4½	4
*ADN	207	Oxygenation Concepts .....	3	4½	4
*ADN	208	Psychological Concepts II .....	1	3	2
ADN	297	Nursing Seminar II .....	0	2	1
		Free Elective .....	3	0	3
			10	14	14

\*Clinical experiences for Nursing students may be scheduled during evening hours on their regular laboratory days, and multi-media laboratory hours are required for these courses.

NOTE—Each student enrolled in Nursing is expected to meet the Mathematics proficiency requirement request guidelines from the Department Chairperson.

**OFFICE SERVICES ASSISTANT PROGRAM**  
Leading to Associate in Applied Science Degree  
on page 60

**GENERAL OFFICE CERTIFICATE PROGRAM**  
on page 61

## FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BIO 131	Human Biology I .....	3	2	4
ENG 110	Written Expression I .....	3	0	3
RAD 100	Introduction to Radiologic Technology .....			2
	First half-semester .....	2	0	
	Second half-semester .....	0	16	
RAD 101	Radiologic Technology I .....	3	1	3
RAD 103	Positioning I .....	0	3	1
RAD 110	Methods of Patient Care .....	2	1	2
RAD 115	Radiation Protection .....	1	0	1
†HSV 101	Cardio-Pulmonary Resuscitation .....	0	1	½
		12-14	8-24	16½

†This course will average out to one hour per week over the semester, but it will probably be given in clusters of 3 hours each in the evening or of 7½ hours each on Saturday to make a total of 15 hours.

## WINTER TERM I

\*RAD 131 Clinical Education I ..... (40 hours per week)

## Spring Semester

BIO 132	Human Biology II .....	3	2	4
ENG 120	Written Expression II .....	3	0	3
PHY 117	Physics .....	2	2	3
RAD 102	Radiologic Technology II .....	3	0	3
RAD 104	Positioning II .....	0	3	1
RAD 132	Clinical Education II .....	0	16	2
		11	23	16

## SUMMER TERM I

\*RAD 133 Clinical Education III ..... 0 40 3

## SECOND YEAR Fall Semester

PSY 110	General Psychology .....	3	0	3
RAD 203	Positioning III .....	0	3	1
RAD 210	Radiologic Physics .....	4	0	4
RAD 220	Radiologic Pathology .....	2	0	2
RAD 230	Clinical Education IV .....	0	16	2
	Social Science Elective .....	3	0	3
CST 105	Understanding Computers .....	2	2	3
		14	21	18

## WINTER TERM II

\*RAD 231 Clinical Education V ..... (40 hours per week)

## Spring Semester

RAD 216	Imaging Modalities .....	1	0	1
RAD 225	Special Radiographic Procedures .....	3	2	4
RAD 232	Clinical Education VI .....	0	16	2
RAD 245	Radiobiology .....	2	0	2
RAD 250	Image Assessment .....	2	1	2
RAD 295	Seminar in Radiography .....	2	0	2
		10	19	13

## SUMMER TERM II

\*RAD 233 Clinical Education VII ..... 0 40 3

Radiologic Technology students comparing X-rays with a skeleton in the College's Radiology Laboratory.



## RADIOLOGIC TECHNOLOGY

DEPARTMENT CHAIRPERSON, Nancy Button  
Business Building, Room 023  
Telephone 771-5070

**Because 2200 hours of clinical practice are required in this curriculum, freshman courses identified with the RAD designator will begin the week of registration, which is one week before the start of regular classes.**

Radiologic Technology is a diverse profession. The radiographer must draw from the fields of communication, psychology, photography and the physical and biological sciences, while utilizing an investigative approach to perform the daily tasks.

The typical role of the radiographer consists of producing radiographs used in the diagnosis of disease and injury. The radiographer finds employment in hospitals, with doctors who maintain private practices, with government agencies, both civil and military, and in industry.

A radiographer may continue education in areas such as ultrasound, nuclear medicine, special radiographic procedures, departmental administration, research, education and radiation therapy.

The Radiologic Technology program at Broome Community College

consists of two academic years on campus and two summers in co-operating hospitals, the equivalent of 24 calendar months. The curriculum is an extremely active one, in which the student is responsible for maintaining academic requirements on campus as well as fulfilling the practical application of this theory at the cooperating hospitals.

The clinical experience is a viable part of the educational process. Upon completion of 2200 hours of clinical practice as well as the academic requirements of the program, the graduate is eligible to sit for the examination of the American Registry of Radiologic Technologists for certification and New York State licensure.

This curriculum is accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association.



# EXECUTIVE SECRETARY

## FIRST YEAR Fall Semester

### OFFICE TECHNOLOGIES

DEPARTMENT CHAIRPERSON, Chester J. Buglia  
Business Building, Room 108  
Telephone 771-5137

Broome Community College offers three options of study in Office Technologies — Executive Secretary, Office Services Assistant, and Word Processing. The department also offers a one-year certificate in General Office. Graduates of the options usually obtain immediate employment as stenographers, secretaries, office assistants, or word processors.

Executive Secretarial students study terminology in such fields as law, education, insurance, real estate, and investments as well as some technical terminology so that they can understand the specialized language used in the professions, government, and business firms as well as the specialized language used in engineering and such new fields as the emerging automated office.

Office Services Assistant students study a variety of courses including accounting, typewriting and office management. The graduates of the Office Services Assistant option, with its emphasis on machine transcription and text editing concepts and equipment, should find employment in word processing centers and other areas of office service work.

Word Processing option students concentrate their study in such areas as word processing concepts, text editing functions and applications, data processing, data entry, and the

administration of automated offices. These graduates are prepared to handle the basic operations and administrative duties of the integrated automated office.

The faculty of this department places the responsibility of class attendance upon the student, who should attend classes regularly and on time. If an employee does not show up for work, he/she can expect to be terminated. A student who does not attend classes can expect to fail.

Faculty will inform students of the College's and department's attendance policies. It is the student's responsibility to understand these policies. Whenever a faculty member feels that a student has been absent or tardy to the extent that it may be detrimental to the student's academic standing, the faculty member will inform the department chairperson, who in turn will meet with the student concerned for appropriate action.

**Non-traditional students and part-time students should meet with the department chairperson or academic advisement coordinator for academic advisement prior to registering for classes. These students must refer to course descriptions to be certain they meet prerequisite requirements prior to registering for courses.**

			Hours per Week		Credits per Semester
			Class	Lab	
BUS 112	Quantitative Business Methods	....	2	0	2
CST 110	Introduction to Data Processing	....	3	0	3
ENG 110	Written Expression I	.....	3	0	3
† SEC 101	A, B, C, Typewriting (Each is a 5-week course)				
	or .....		2	3	3
† SEC 102	A, B, C, Typewriting (Each is a 5-week course)				
SEC 109	Basic Transcription	.....	3	0	3
SEC 110	Shorthand	.....	2	3	3
SEC 130	Freshman Orientation	.....	*	0	½
			*15½	6	17½

† SEC 101 and SEC 102 are modular courses, with each module 5 weeks long. Students will take the appropriate course, based on their records. Please refer to course descriptions.

\* SEC 130 Freshman Orientation meets every other week for one hour.

### Spring Semester

ENG 120	Written Expression II	.....	3	0	3
SEC 102	A, B, C, Typewriting	.....	2	3	3
	(Each is a 5-week course)				
SEC 111	Shorthand & Transcription	.....	2	3	3
SEC 151	Business Communications	.....	3	0	3
	Lab Science Elective	.....	2-3	2-0	3
			12-14	6-8	15

### SECOND YEAR Fall Semester

BUS 100	Accounting I	.....	4	0	4
# SEC 237	Text Editing I	.....	1	4	1
# SEC 238	Text Editing II	.....	1	4	1
# SEC 235	Machine Transcription Mod	.....	1	4	1
SEC 230	Advanced Shorthand	.....	2	3	3
ECO 110	Introduction to Micro-Economics or .....		3	0	3
ECO 111	Introduction to Macro-Economics Mathematics or Science Elective	...	2-3	0-2	3
# SEC 243	Records Management	.....	3	0	1
			15-16	7-9	17

# Each course is a 5-week module.

### Spring Semester

SEC 211	Advanced Typewriting	.....	2	2	3
SEC 242	Office Procedures	.....	3	0	3
BUS 118	Business Law	.....	3	0	3
SEC 260	Model Office	.....	0	4	2
	Social Science Elective	.....	3	0	3
	Liberal Arts Elective	.....	3	0	3
			14	6	17

## OFFICE SERVICES ASSISTANT

### FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS 112	Quantitative Business Methods . . . .		2	0	2
BUS 118	Business Law . . . . .		3	0	3
CST 110	Introduction to Data Processing . . . .		3	0	3
† SEC 101	A, B, C, Typewriting (Each is a 5-week course)				
	or . . . . .		2	3	1
† SEC 102	A, B, C Typewriting (Each is a 5-week course)				
SEC 109	Basic Transcription . . . . .		3	0	3
SEC 130	Freshman Orientation . . . . .		*	0	½
ENG 110	Written Expression I . . . . .		3	0	3
			*16½	3	17½

† Students typing background will determine placement.

\* SEC 130 Freshman Orientation meets every other week for one hour.

### Spring Semester

SEC 102	A, B, C Typewriting (Each is a 5-week course)		2	3	1
SEC 151	Business Communications	.....	3	0	3
ENG 120	Written Expression II	.....	3	0	3
	Lab Science Elective	.....	2-3	2-0	3
	Liberal Arts Elective	.....	3	0	3
			13-15	2-5	15-16

### SECOND YEAR Fall Semester

BUS 100	Accounting I	.....	4	0	4
# SEC 237	Text Editing I	.....	1	4	1
# SEC 238	Text Editing II	.....	1	4	1
SEC 211	Advanced Typing	.....	2	2	3
SEC 236	Machine Transcription	.....	2	2	3
ECO 110	Introduction to Micro-Economics	....	3	0	3
			12-13	4-8	15

# Each course is a 5-week module.

### Spring Semester

BUS 101	Accounting II	.....	4	0	4
SEC 242	Office Procedures	.....	3	0	3
SEC 260	Model Office	.....	0	4	2
SEC 243	Records Management	.....	3	0	1
ECO 111	Introduction to Macro-Economics	....	3	3	3
	Math or Science Elective	.....	2-3	0-2	3
			15-16	4-6	16

## WORD PROCESSING

### FIRST YEAR Fall Semester

			Credits per		
			Hours per Week	Semester	
			Class	Lab	
BUS 112	Quantitative Business Methods ....		2	0	2
CST 110	Introduction to Data Processing ....		3	0	3
ENG 110	Written Expression I.....		3	0	3
†SEC 101	A, B, C Typewriting (Each is a 5-week course)				
	or.....		2	3	3
†SEC 102	A, B, C Typewriting (Each is a 5-week course)				
SEC 109	Basic Transcription.....		3	0	3
SEC 130	Freshman Orientation.....		*	0	½
	Lab Sciences Elective.....		2-3	2-3	3-4
			*15½-16½	3-5	17½

† Student's typewriting background will determine placement.

\* SEC 130 Freshman Orientation meets every other week for one hour.

### Spring Semester

ENG 120	Written Expression II	.....	3	0	3
MAT 117, 121, 124	.....		3-4	0	3-4
SEC 102	A, B, C Typewriting (Each is a 5-week course)	.....	2	3	3
	or				
	Business Elective	.....	3	0	3
SEC 151	Business Communications	.....	3	0	3
SEC 236	Machine Transcription	.....	2	2	3
			13-14	5	15-16

### SECOND YEAR Fall Semester

BUS 100	Accounting I	.....	4	0	4
CST	Computer Language Elective or Business Elective	.....	2-4	0-2	3-4
SEC 241	Word Processing Concepts	.....	3	0	3
# SEC 237	Text Editing I	.....	1	4	1
# SEC 238	Text Editing II	.....	1	4	1
# SEC 239	Text Editing III	.....	1	4	1
	Social Science Elective	.....	3	0	3
			15-17	4-6	16-17

# Each course is a 5-week module

### Spring Semester

BUS 101	Accounting II or BUS Elective	.....	3-4	0	3-4
SEC 250	Office Administration	.....	3	0	3
SEC 260	Model Office	.....	0	4	2
SEC 243	Records Management	.....	3	0	3
	Liberal Arts Elective	.....	3	0	3
	Social Science Elective	.....	3	0	3
			15-16	4	15-16



# TOOL AND DIE MAKING

(NOT ADMITTING NEW STUDENTS IN DAY PROGRAM FOR 1984-85)

PROGRAM COORDINATOR, Blaine Ellis  
Mechanical Building, Room 117  
Telephone 771-5000

This day program will not accept new students for the 1984-85 academic year but will continue to function for those students enrolled for their second year. The College will also continue to operate a program in the evening in Tool and Die Making, and students interested in enrolling should contact the coordinator of the curriculum, who is listed above.

Satisfactory completion of the entire curriculum qualifies an individual for the Associate in Occupational Studies (AOS) Degree Credits earned toward this degree are generally not considered for transfer.

It is possible that some students will desire less academic experience than is offered by the complete curriculum because of an interest in the

machine trades. These desires can be fulfilled by taking the "Machinist Related Certificate" program. See page 70.

## GENERAL OFFICE CERTIFICATE PROGRAM

### Fall Semester

		Hours per Week		Credits
		Class	Lab	per Semester
†SEC 101	A,B,C Typewriting (Each is a 5-week course)			
	or .....	2	3	3
†SEC 102	A,B,C Typewriting (Each is a 5-week course)			
BUS 110	Introduction to Business .....	3	0	3
ENG 100	Basic Language Skills .....			
	or .....	3	0	3
ENG 110	Written Expression I .....			
	Elect 1 of the following: .....	3	0	3
PSY 100	Psychology of Personal Adjustment			
PSY 110	General Psychology			
SAC 101	The Individual in a Changing Environment			
SAC 295	Seminar in Human Potential			
SEC 109	Basic Transcription .....	3	0	3
*SEC 130	Freshman Orientation .....	*	0	½
		* 14½	3	15½

†SEC 101 and SEC 102 are modular courses, with each module 5 weeks long. Students will take the appropriate course based on their records. Please refer to course descriptions.

\*SEC 130 Freshman Orientation meets every other week for one hour

### Spring Semester

SEC 102	A,B,C Typewriting .....	2	3	3
	(Each is a 5-week course)			
	or .....			
	Business Elective .....	(3)	(0)	(3)
SEC 151	Business Communications .....	3	0	3
SEC 246	Office Machines .....	2	3	3
SEC 248	Office Procedures .....	3	0	3
	Business Elective .....	3-4	0	3-4
		13-15	3-6	15-16

### FIRST YEAR Fall Semester

		Hours per Week		Credits
		Class	Lab	per Semester
TDA 111	Blueprint Reading .....	3	0	3
TDA 113	Survey of Industrial Safety & First Aid .....	2	0	2
MAT 139	Algebra .....	4	0	4
TDA 114	Benchwork .....	2	0	2
MET 121	Manufacturing Processes I .....	2	2	3
MET 113	Engineering Drawing I .....	1	2	2
		14	4	16

### Spring Semester

ENG 150	Technical Writing .....			
	or .....	3	0	3
ENG 110	Written Expression I .....			
MAT 140	Trigonometry .....	4	0	4
MET 114	Engineering Drawing II .....	1	2	2
MET 122	Manufacturing Processes II .....	1	3	2
TDA 120	Precision Measurement & Inspection .....	3	0	3
TDA 200	Metallurgy .....	1	2	2
ECO 104	Labor Economics & American Industry .....	3	0	3
		16	7	19

### SECOND YEAR Fall Semester

TDA 130	Tool Grinding .....	1	2	2
TDA 140	Production Processes .....	3	0	3
BUS 255	Industrial & Labor Relations .....	2	0	2
TDA 132	Statics .....	2	0	2
TDA 261	Introduction to Quality Control and Inspection .....	3	0	3
MET 223	Manufacturing Processes III .....	1	2	2
BUS 252	Supervision of Personnel .....	2	0	2
		14	4	16

### Spring Semester

TDA 248	Hydraulics & Pneumatics .....	2	2	3
EET 181	Installation and Maintenance of Electric Motors .....	1	2	2
TDA 250	Control Systems .....	3	0	3
TDA 230	Tool Design .....	4	0	4
TDA 235	Strength of Materials .....	3	0	3
		13	4	15

## MEETING MANY NEEDS

People often think that higher education is available only for recent high school graduates. Broome Community College tries to reach out and meet the educational needs of ALL the people in Broome County. "Community" is part of the College's name and a large portion of its mission. BCC is concerned about meeting the needs of the part-time student, as well as those enrolled full time.

Anyone in the community may enroll as a part-time student, and BCC attracts a large number each year. The fall 1983 part-time enrollment, for example, was over 3,000 men and women, most of them for evening classes as they are largely adults who work during the day. In recent years the College has also increased its enrollment of part-time day students, and the total was about 500 last fall.

## PART-TIME STUDENTS . . . .

are those who take fewer than 12 credits per semester, usually one or two courses. At BCC, part-time students can:

- Enroll in credit or non-credit mini courses.
- Take day or evening courses or both.
- Attend classes in the fall, spring or summer semester.
- Earn a degree or not, as they see fit. Certificate programs are also available.
- Apply for financial aid—if carrying 6 or more credits.
- Receive academic advice and personal counseling.
- Find other students over 21.
- Borrow books from the College Library.
- Carry one, two or three courses.
- Belong to the Part-Time Student Association.
- Receive Veterans' benefits.
- Transfer credits to BCC earned at another college.

**NOTE—** Many firms have a tuition-reimbursement plan that pays all or part of an employee's tuition and costs if his/her courses are job-related.

The College conducts a special Information Session for new part-time students at the beginning of the fall and spring semesters to inform prospective students what programs are available, how to register, how to get started at BCC, and to answer their many questions.

## CREDIT/DEGREE PROGRAMS FOR EVENING PART-TIME STUDENTS

Broome Community College offers 19 degree programs which can be completed through part-time study. Most of the courses in these programs can be completed in evening or weekend study. On the following pages are displays for the following degree programs:

### Associate in Applied Science

1. Business (Accounting Emphasis) . . . Page 64
2. Business (General Emphasis in Marketing Management and Sales) . . . Page 64
3. Child Care . . . Page 65
4. Criminal Justice . . . Page 65
5. Data Processing . . . Pages 40, 43
6. Computer Technology . . . Pages 40, 43
7. Fire Protection Technology . . . Page 66
8. Individual Studies . . . Page 47

### Industrial Technology

9. Chemical Emphasis . . . Page 66
10. Electrical Emphasis . . . Page 67
11. Industrial Safety and Occupational Hygiene . . . Page 67
12. Mechanical Emphasis . . . Page 67
13. Production Management . . . Page 68
14. Paralegal Assistant . . . Page 68

### Associate in Arts

15. Liberal Arts and Sciences . . . Page 69

### Associate in Science

16. Liberal Arts—Science Option . . . Page 69
17. Liberal Arts—Mental Health and Retardation . . . Page 69
18. Individual Studies . . . Page 47

### Associate in Occupational Studies

19. Tool and Die Making . . . Page 70

Additionally, the College sponsors several certificate programs. These are detailed on page 70.



# PART-TIME STUDENTS

## ENROLLMENT

### First-Time Enrollment

Those enrolling as part-time students for the first time at Broome Community College should be aware of the following services available to them:

- Information Sessions
- Registration and Advisement
- Financial Aid
- Veterans Benefits

**THE INFORMATION SESSIONS** are conducted prior to each term. At this time, one can learn about the College and its programs, how to register, how to schedule courses, and how to get answers to questions.

**REGISTRATION IS REQUIRED.** First-time students must register, in person or by mail. They must pay their tuition at the time they register in person, or when billed if registering by mail.

**RESIDENCY REQUIREMENTS.** See page 12.

### Continued Enrollment

Those who are continuing their studies at the College as part-time students should always keep in close touch with their academic advisors and follow the procedure shown on pages 62 to 70 for their program of study, so that they do not overlook any courses they should take.

They also are eligible for the financial aid and veterans benefits of first-time, part-time students, and they have to comply with the same residency requirements. They must also register, either by mail or in person. Tuition must be paid at the time of registration, if in person, or when billed if registering by mail.

## MATRICULATION

### Part-time Day and Evening Students

The *All-Purpose Reminder Form* is used by the College for several procedures, one of which is matriculation into academic programs.

Students wishing to be admitted to part-time day or evening degree programs (with the exception of the Health Sciences) should fill out an *All-Purpose Reminder Form*. This form may be obtained in the Wales Building Room 111. Upon acceptance, the student will receive a formal letter of admission.

## ADVISEMENT

Academic advisors are available in the Student Academic Advisement Center (Room 111, Wales Building) to accommodate the evening student population at Broome Community College.

**Evening Part-time Students** who are nearing the completion of their certificate or degree requirements or those who need to know the requirements for any degree program offered in the evening, should consult one of the academic advisors. Each advisor is prepared to handle questions concerning any degree program. There will be advisors available from Monday through Thursday evening in Room 111 of the Wales Building (no appointment necessary).

**Day part-time Students** seeking advisement should contact the chairpersons of their academic departments. They should also apply to their chairpersons when they are ready to receive their associate degrees.

All part-time students, with the exception of those in the Health Science areas, are matriculated through the Academic Advisement Office in Room 111 of the Wales Building. Health Science students are accepted through the Admissions Office.

## TUITION

Part-time students are those who carry fewer than 12 credit hours. Tuition and fees are listed on pages 12 and 13.

**FINANCIAL AID** is available to part-time students who take 6 or more credits. Many companies have tuition reimbursement plans, and employees should familiarize themselves with their companies' policy. The College has a Financial Aid office in the Wales Building, Room 101 to answer questions about this. If one's company is paying, a letter to that effect should be brought to registration.

## GRADUATION

### Evening Students Only

All awards for Degrees, and Certificates for part-time students at Broome Community College are conferred in May. Evening students who expect to complete course requirements by May must declare their candidacy by filing an *All-Purpose Reminder Form* in Wales 111 prior to February 1 of that year. This will initiate an official review of the records and a formal letter of candidacy. The Registrar's Office will also be notified, and it will send out information in April pertaining to the awards ceremonies.

## ADVISOR FOR PRIOR LEARNING

### Transfer Credits

• Courses completed at another college prior to enrolling at Broome Community College will be considered for transfer credits. The student, however, must initiate the request for this consideration.

• An official transcript must be on file for all students—part-time or full—prior to transcript review for transfer purposes.

### Credit for Prior Non-Academic Experience

Credit may be given for life experiences or previous employment accomplishments. A number of methods exist for receiving this credit, and details are available from the dean of the division in which one is pursuing a degree.

Students may also find it advantageous to request credit by examination for a course in whose field they have previous experience. They can do this by taking a special examination. If they pass this test, they can receive "Credit by Examination" for the course and will not have to take it, thus saving the cost of tuition and the semester(s) involved. Taking this examination for credit requires payment of a fee for a non-laboratory course. If the course has a laboratory, an additional fee will be charged for the laboratory portion of the exam.

## PART-TIME STUDENT ASSOCIATION

The Part-time Student Association (PTSA) provides the part-time students with a means of planning, organizing and operating activities and organizations. It provides a basis for discussion and action on academic, cultural and social matters and affords students an opportunity to express their views on significant issues.

All part-time students may be participating members.

### Summer Session

Each summer Broome Community College offers several terms of summer sessions from 6 to 8 weeks long, in day and evening sections. An announcement of the Summer schedule and policies is available in April of each year.

### Weekend Courses

In addition to a daily class schedule, the College also sponsors courses on Friday and Saturdays. Schedules are printed each semester.

## DISPLAY OF CREDIT PROGRAMS

Following are displays of courses for the programs that the College offers to part-time students. Most of these are given in the evening, although some are day offerings. Students who pursue these programs should meet with their academic advisors or program coordinators to determine the best approach to meeting their individual needs.

The displays of courses in each curriculum are divided into three categories to assist the student in determining which courses to take and in what order.

**Category 1 - "Introductory Courses"** are entry-level courses in each program. They are frequently prerequisites for courses that must be taken later.

**Category 2 - "Additional courses for Certificate"** are those which together with the introductory courses will satisfy the requirements for the curriculum certificate. The certificate is about the mid-point for the attainment of an associate degree.

**Category 3 - "Remaining Courses for Degree"** lists the additional courses required for the completion of the associate degree.

Students should always consult with their advisors, as sometimes special course consideration is possible.

## ASSOCIATE IN APPLIED SCIENCE—BUSINESS

### ACCOUNTING EMPHASIS

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

Introductory Courses	Credits
BUS 100 Accounting I	4
BUS 101 Accounting II	4
BUS 112 Quan. Business Methods	2
BUS 118 Business Law I	3
ENG 110 Written Expression I or ENG 100 Basic Language Skills	3
<b>Additional Courses for Certificate</b>	
BUS 157 Report Writing	3
Liberal Arts Elective	3
Accounting Courses	10
	<hr/> 32

<b>Remaining Courses for Degree</b>	
Accounting Courses	8
†Business Related Courses	8
Social Sciences	6
English Elective	3
BUS 221 Math for Business Analysis or BUS 115 Business Statistics	2-3
PHS 111 Physical Science for Today	3
Math or Science Elective	3-4
<b>AAS Business (Accounting Emphasis)</b>	
Minimum Semester Credits	65-67

†Business related courses from BUS, CST, MAT, MET or SEC course numbers as approved by the Academic Advisor for Business.

Business students who have taken courses through AIB, LOMA, or other recognized national programs of study and examination should apply to the Academic Advisor for consideration or credit.

### GENERAL EMPHASIS

#### (MARKETING MANAGEMENT AND SALES)

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

Introductory Courses	Credits
BUS 100 Accounting I	4
BUS 101 Accounting II	4
BUS 112 Quan. Business Methods	2
BUS 118 Business Law I	3
ENG 110 Written Expression I or ENG 100 Basic Language Skills	3
BUS 141 Marketing	3

#### Additional Courses for Certificate

BUS 157 Report Writing	3
Liberal Arts Elective	3
Business Courses (see below)	7
	<hr/> 32

#### Remaining Courses for Degree

Business Courses (see below)	8
Business Related Courses (see below)	8
Social Sciences	6
English Elective	3
BUS 115 Business Statistics or BUS 221 Math for Business Analysis	2-3
PHS 111 Physical Science for Today	3
Math or Science Elective	3-4
<b>AAS in Marketing Management and Sales</b>	
Minimum Semester Credits	64-65

Suggested Management Electives: BUS 141, BUS 150, BUS 224, BUS 243, BUS 246, BUS 252, BUS 255, BUS 256, BUS 257, BUS 258, BUS 261, BUS 270, BUS 360, BUS 361, BUS 362.

Suggested Sales Electives: BUS 120, BUS 129, BUS 131, BUS 141, BUS 147, BUS 152, BUS 154, BUS 226, BUS 238, BUS 247.

**NOTE:** A number of choices exist in The Business—General Emphasis Certificate Program. By carefully selecting the proper Business courses, students can generate a concentration in a particular area, such as Sales, Retailing or Management. To identify these courses, students should discuss their interests with their academic advisor.

The courses completed to earn the certificate are acceptable as credits toward an Associate in Applied Science degree in Marketing Management and Sales.



## A.A.S.—CHILD CARE

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

<b>Introductory Courses</b>		<b>Credits</b>
PSY 110 General Psychology		3
PSY 211 Child Development		3
CDC 100 Introduction to the Education of Young Children		3
ENG 110 Written Expression I		3
CDC 120 Curriculum Development		3
<b>Additional Courses for Certificate</b>		
SOC 110 Introduction to Sociology		3
CDC 200 Social Psychology of Education		3
Child Care Electives (see list below)		9
		30
<b>Remaining Courses for Degree</b>		
English/Literature		3
Humanities Elective (see list below)		3
Math or Science Elective (see list below)		6-8
Child Care Electives (see list below)		3
CDC 170 Practicum I		3
CDC 290 Practicum II		6
Related Approved Electives (see list below)		6
AAS Child Care Minimum Semester Credits		60-62

### More Information:

Marilyn Schafer, Program Coordinator, Francis J. Short, Chairman. (Phone 771-5029).

#### CDC Electives:

Students may select 12 hours of courses designated for Child Care, such as CDC 115, CDC 140, CDC 150, CDC 160, CDC 210, CDC 220, CDC 230, CDC 250, LIT 263

#### Related Electives:

Students may elect 6 hours from the Related Approved Electives from the following: PSY 103, PSY 212, PSY 214, PSY 217, PSY 220, PSY 227, SOC 230, SOC 210, SOC 234, or from other disciplines with permission.

#### Elective Areas:

**Suggested Humanities**—select from English, Languages, Fine Arts, Philosophy, Speech (SPK 102 recommended)

**Math or Science**—select from Math, Biology, Chemistry, Physics, Physical Science (MAT 113, BIO 131, CHM 120 recommended)

## COMPUTER OFFERINGS

### COMPUTER SCIENCE (Associate in Science Degree)

### COMPUTER TECHNOLOGY (Associate in Applied Science Degree)

### DATA PROCESSING (Associate in Applied Science Degree)

These degrees are discussed in detail on pages 40 to 43. Courses will be offered in both the daytime and evening. Part-time students are encouraged to enroll. The entrance requirements for each program are listed in the table on page 7. Information on matriculation, registration and advisement is available from the Student Academic Advisement Center in Room 111 of the Wales Administration Building. Call 771-5150.

Part-time student adviser & coordinator — Paulette Gannett. Phone 771-5113.

Department Chairperson — Mary Diegert. Phone 771-5022.

## A.A.S.—CRIMINAL JUSTICE

This program is designed for individuals considering employment upon graduation or for those already employed in the Criminal Justice field. Students intending to transfer for advanced degrees are advised to pursue the Criminal Justice option in Liberal Arts (see page 51)

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

<b>Introductory Courses</b>		<b>Credits</b>
ENG 110 Written Expression I		
or ENG 100 Basic Language Skills		3
SOC 110 Introduction to Sociology		3
Criminal Justice Elective		3
CRJ 101 Intro. to Criminal Justice		3
<b>Additional Courses for Certificate</b>		
PSY 110 General Psychology		3
SPK 102 Effective Speaking		3
POS 201 The American Political System or POS 204 American State & Local Government		3
Sociology Elective		3
Psychology Elective		3
Criminal Justice Courses		6
		33

### Remaining Courses for Degree

Lab Science or Math or Combination	6
Philosophy Elective	3
Free Electives (any field: Social Science recommended)	6
Criminal Justice Courses	12
AAS Criminal Justice Minimum Semester Credits	60

Credit for academy training will be considered after admission to candidacy on the basis of about one credit per 40 or one credit per 50 contact hours, with option to receive transfer credit for other Criminal Justice related programs up to 12 credits total. The requirement will be that the individual must provide documentation of attendance and relevancy of work.

### More Information:

Francis J. Short, Chairman, Phone 771-5087  
William F. Michalek, Coordinator

**PART-TIME STUDENTS**

# A.A.S.—FIRE PROTECTION TECHNOLOGY

The Fire Protection Technology Program is designed to provide fire fighters and related fire service personnel with specialized training. The curriculum has been developed by a local advisory committee to meet the needs of the area, and specialized courses as well as general education courses constitute the degree program. Specialized courses include Fire Fighter Tactics and Strategy, Arson Investigation, Hydraulics, Hazardous Materials, Fire Prevention, and Building Construction.

This program is open to both paid and volunteer fire fighters of the community, as well as those persons in related firematic areas.

## More Information:

Francis J. Short, Chairman (Phone 771-5087)  
Anthony Winkler, Program Coordinator

**PART-TIME STUDENTS**

**INDIVIDUAL STUDIES**  
(Associate in Applied Science  
or Associate in Science Degrees)  
See page 47

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed.

## Introductory Courses

	Credits
ENG 110 Written Expression I	3
Fire Protection Courses	9

## Additional Courses for Certificate

SPK 102 Effective Speaking	3
Mathematics or Science Elective (see list below)	3-4
Chemistry (see list below)	3
Social Sciences (see list below)	3
Fire Protection Courses	6
	<hr/> 30-31

## Remaining Courses for Degree

Fire Protection Courses	6
Social Sciences (see list below)	3
Health (see list below)	3
Management (see list below)	6
Electives (see list below)	12
	<hr/>

AAS Fire Protection Technology Minimum Semester Credits	60-61
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## Recommended Electives

Chemistry: Suggest CHM 120

Mathematics: Suggest MAT 139 (4 Credits)

Social Sciences: Choose from History, Anthropology, Sociology, Psychology, Political Science, Economics.

Health: Advanced First Aid Emergency Medical Technician Programs or equivalent may be submitted for approval.

Fire Protection Courses: Select from FRS 101, FRS 103, FRS 105, FRS 107, FRS 108, FRS 200, FRS 201, FRS 205, FRS 210, FRS 250, FRS 299.

Management: Suggest BUS 245, BUS 246, BUS 258, BUS 262, BUS 150.

Electives: Courses with FRS, SAF, MAT designators, CHM 121, CHM 290 or other courses with permission.

# A.A.S. INDUSTRIAL TECHNOLOGY

## CHEMICAL EMPHASIS

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

## Introductory Courses

	Credits
MAT 139 Algebra	4
CHM 145 Chemistry	4
English Electives (see list below)	3

## Additional Courses for Certificate

CHM 146 Chemistry	4
CHM 291 Organic Chemistry I	3
CHM 292 Organic Chemistry II	3
PHY 141 Physics	4
MAT 140 Trigonometry	4
CST 122 Computer Programming— FORTRAN (Technical)	3
	<hr/> 32

## Remaining Courses for Degree

PHY 142 Physics	4
CHM 293 Analytical—Instrumental Chemistry I	3
CHM 294 Analytical—Instrumental Chemistry II	3
English Electives (see list below)	3
Social Science Electives (see list below)	6
Approved Technical Science Electives (see list below)	13
	<hr/>

AAS Industrial Technology (Chemical Emphasis) Minimum Semester Credits	64
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The following may be taken as approved technical/science courses to meet degree requirements: CHM 296, CHM 297, CHM 298, MAT 163, MAT 164, CST 130, EET 111, EET 112, EET 125, EET 126, CIV 260, MET 245, MET 261, BIO 111, BIO 112

Suggested English Courses:

ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:

ECO 110, ECO 111, PSY 110, SOC 110, SOS 130



## ELECTRICAL EMPHASIS

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

Introductory Courses	Credits
MAT 139 Algebra	4
MAT 140 Trigonometry	4
EET 125 Circuits	3
ENG 110 Written Expression I	3
<b>Additional Courses for Certificate</b>	
EET 126 Circuits II	3
EET 255 Electronics I	4
MET 113 Engineering Drawing	2
CST 122 Computer Programming— FORTRAN (Technical)	3
Social Science Elective (see list below)	3
Approved Technical Electives (see list below)	3
	<hr/> 32

### Remaining Courses for Degree

EET 235 Electrical and Electronics Drawing	2
EET 245 Electrical Machines	4
EET 256 Electronics II	4
EET 257 Electronics III	4
EET 267 Digital Electronics & Microprocessors	4
PHY 141 & PHY 142 Physics	8
ENG 150 Technical Writing	3
Social Science Elective (see list below)	3
AAS Industrial Technology (Electrical Emphasis) Minimum Semester Credits	<hr/> 64

#### Approved Technical Electives:

EET 111, EET 112, EET 268, MAT 124, MAT 163, MAT 164, MAT 264, MET 245, MET 132, MET 247, MET 249, MET 253, MET 255, MET 261, MET 280, MET 285, MET 286, MET 287, CIV 228, CIV 268, CIV 155, CHM 145, CHM 146, CST 115, CST 126, CST 130, CST 150, CST 200, CST 202, CST 205, CST 222, CAD 200, CAD 201, CAD 220

#### Suggested Social Science Courses:

ECO 104, ECO 110, ECO 111, PSY 100, PSY 110, SOC 110, SOS 120, SOS 130

Courses in the fast changing engineering technologies such as Electronics, Design & Fabrication, Computers and Machine & Controls, can not be used for degree requirements if they were taken more than 5 years prior to graduation date. One exception to this rule would be the student who has been in the degree program for a number of years and has taken at least one required course every fall and spring semester.

# A.A.S.—INDUSTRIAL TECHNOLOGY

## INDUSTRIAL SAFETY AND OCCUPATIONAL HYGIENE OPTION

**Persons considering enrollment in this program must consult with the department chairman**

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

Introductory Courses	Credits
CHM 120 Fundamentals of Chemistry	4
ENG 110 Written Expression I	3
MAT 139 Algebra	4
SAF 100 OSHA Codes and Regulations	3
<b>Additional Courses for Certificate</b>	
Social Science Elective	3
MAT 124 Statistics	3
BIO 131 Human Biology	4
SAF 120 Introduction to Industrial Hygiene	3
†SAF Industrial Safety Courses	6
	<hr/> 33

### Remaining Courses for Degree

Social Science Electives	3
ENG 150 Technical Writing or SPK 102 Effective Speaking	3
†SAF Industrial Safety Courses	9
Technical Electives (see list at right)	8
Business Electives (see list at right)	7

## MECHANICAL EMPHASIS

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

Introductory Courses	Credits
MAT 139 Algebra	4
MAT 140 Trigonometry	4
MET 113 Engineering Drawing I	2
English Elective (see list at right)	3
<b>Additional Courses for Certificate</b>	
MET 121 Manufacturing Processes I	3
MET 122 Manufacturing Processes II	2
PHY 141 Physics	4
CST 122 Computer Programming— FORTRAN (Technical)	3
MET 132 Applied Mechanics	4
Approved Technical Electives (see list at right)	3
	<hr/> 32

### Remaining Courses for Degree

MET 235 Strength of Materials	3
MET 253 Engineering Materials & Industrial Processes	3

AAS Industrial Technology  
Industrial Safety and Occupational  
Hygiene Option Minimum Semester  
Credits. . . Total

62

†Industrial Safety courses—SAF 101 Accident Investigation and Prevention, SAF 102 Design and Evaluation of Safety Program, SAF 105 Material Handling and Storage of Common and Special Products, SAF 110 Ventilation and Exhaust, SAF 111 Machine Guarding, SAF 130 Product Safety, SAF 250 Special Topics (1 to 3 credits), FRS 101 Fire Prevention and Protection, FRS 200 Hazardous Materials (All are 3 credits, except where marked otherwise.)

Technical electives—MET 287 Plant Layout and Material Handling (2 credits), FRS 108 Building Construction (3 credits), CHM 121 or CHM 290 Chemistry. Others by permission.

Business electives—BUS 118 Business Law (3 credits), BUS 150 Personnel Administration (2 credits), BUS 207 Managerial Accounting I (2 credits), BUS 252 Supervision of Personnel (2 credits). Others by permission.

### More Information:

Francis J. Short, Chairman (Phone 771-5087)  
Donald Pixley, Program Coordinator

MEI 261 Engineering Statistics & Quality Control	3
PHY 142 Physics	4
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Technical Electives (see list below)	<hr/> 10
AAS Industrial Technology (Mechanical Emphasis) Minimum Semester Credits	<hr/> 64

The following may be taken as approved technical elective courses to meet degree requirements:

MET 114, MET 223, MET 245, MET 280, MET 285, MET 286, MET 287, EET 111, EET 112, EET 125, EET 126, EET 255, EET 256, EET 257, CIV 159, CIV 160, CIV 161, CIV 251, CIV 252, CIV 255, CHM 145, CHM 146, MAT 163, MAT 164

#### Suggested English Courses:

ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

#### Suggested Social Science Courses:

ECO 104, ECO 110, ECO 111, ECO 120, PSY 100, PSY 110, SOC 110, SOS 130

## INDUSTRIAL TECHNOLOGY

### PRODUCTION MANAGEMENT EMPHASIS

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

#### Introductory Courses

	Credits
*MAT 139 Algebra	4
*MAT 140 Trigonometry	4
MET 113 Engineering Drawing I	2
English Elective (see list at right)	3

#### Additional Courses for Certificate

MET 121 Manufacturing Processes I	3
MET 122 Manufacturing Processes II	2
PHY 141 Physics	4
BUS 149 Management & Organization I	2
MET 280 Management Decisions	2
MET 285 Time, Motion & Wage Study	2
Approved Electives (see list at right)	4
	<hr/> 32

#### Remaining Courses for Degree

CST 122 Computer Programming— FORTRAN (Technical)	3
BUS 252 Supervision of Personnel	2
MET 261 Engineering Statistics & Quality Control	3
MET 286 Production Control	2
MET 287 Plant Layout & Materials Handling	2
PHY 142 Physics	4
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Electives (see list below)	7
AAS Industrial Technology (Production Management Emphasis) Minimum Semester Credits	<hr/> 64

\*Must have a minimum of 4 hours of Mathematics as a requirement for the degree if background makes it unnecessary to take MAT 139 Algebra and MAT 140 Trigonometry.

The following may be taken as approved elective courses to meet degree requirements:

CST 110, MET 114, MET 125, MET 132, MET 235, MET 253, MET 255, MET 272, EET 111, EET 112, EET 125, EET 126, CIV 159, CIV 160, CIV 161, BUS 118, BUS 154, BUS 243, BUS 255, MAT 163, MAT 164

Suggested English Courses:

ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:

ECO 104, ECO 110, ECO 111, ECO 120, PSY 100, PSY 110, SOC 110, SOS 130

## PARALEGAL ASSISTANT

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

#### Introductory Courses

	Credits
ENG 110 Written Expression I	3
PLA 110 Survey of Paralegalism	3
PSY 110 General Psychology or SOC 110 Introduction to Sociology	3

#### Additional Courses for Certificate

ENG 120 Written Expression II or SPK 102 Effective Speaking	3
PLA 120 Advanced Paralegalism	3
PLA 210 Legal Drafting	3
PLA 200 Real Property Law	3
PLA 205 Techniques of Research	3
PLA (Paralegal) Elective	3
BUS (Business) Elective	3
	<hr/> 30

#### Remaining Courses for Degree

BUS 100 Accounting I	4
PLA 215 Estates, Probates & Trusts	3
PLA (Paralegal) Elective	3
Math/Science Electives	6
SOC (Social Science) Elective	3
Liberal Arts Electives	6
Free Electives	6
	<hr/> 61

AAS Paralegal Assistant

Minimum Semester Credits

Suggested Math/Science Courses:

MAT 124, MAT 121, BIO 131, CHM 120, PHS 111, MAT 110, MAT 111

#### More Information:

Francis J. Short, Department Chairman  
(Phone 771-5087)

Matthew Vitanza, Program Coordinator

Recommended Social Science Courses

PSY 217, SOC 210, ECO 110 or 111, POS 204.

Recommended Liberal Arts Courses  
and free electives

Political Science (POS), Psychology (PSY), Economics (ECO), Philosophy (PHI), Literature (LIT), Sociology (SOC).

**PART-TIME STUDENTS**



## A.A.—LIBERAL ARTS

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

Introductory Courses	Credits
Liberal Arts Courses	6
<b>Additional Courses for Certificate</b>	
English (Composition)	6
Approved Humanities	3
Approved Social Sciences	6
Approved Liberal Arts Courses	11
	<hr/> 32
<b>Remaining Courses for Degree</b>	
Remainder of degree requirements (see below)	30
	<hr/>
AA Liberal Arts & Sciences	
Minimum Semester Credits	62

### Minimum requirements for AA degree:

English—a minimum of 12 credits, of which 6 shall be in composition and 6 in literature

History—a minimum of 6 credits in approved courses including HIS 100 The Rise of the West

Humanities—a minimum of 6 credits (6 in Philosophy or 6 in a foreign language)

Mathematics—students who have completed fewer than 3 units of secondary school mathematics (through 11th year math) are required to take 2 semesters of college level mathematics • Students who have completed 3 units of secondary school mathematics (through 11th year math) are required to take one semester of college level mathematics • Students who have completed more than 3 units of secondary school mathematics (including 11th year math) are not required to take additional math. They may, however, elect an appropriate math course or an elective in another field

Natural and Physical Sciences—a minimum of 8 credits

Social Sciences—a minimum of 6 credits

Electives—minimum of 16 credits (A maximum of 15 credits may be taken outside the offerings in Liberal Arts & Sciences with the approval of the Dean of Liberal Arts)

Satisfactory completion of all courses in a curriculum or as approved in a department

The Associate in Arts program is structured to allow the greatest flexibility in course selection and sequence. It is recommended that students begin with the requirement in Written Expression, which is 6 hours of ENG 110 and ENG 120.

### More Information:

George Higginbottom, LA Dean (Phone 771-5031)

## ASSOCIATE IN ARTS—LIBERAL ARTS

### LIBERAL ARTS SCIENCE OPTION

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

Introductory Courses	Credits
ENG 110 Written Expression I	3
ENG 120 Written Expression II	3
<b>Additional Courses for Certificate</b>	
* 2 Science Electives (a sequence)	8
* 2 Science Electives (a sequence)	8
HIS 100 Rise of the West	3
History Elective	3
# 2 Social Science Electives	6
Mathematics or Philosophy or	
Foreign Language (see below)	6-8
	<hr/> 34-36
<b>Remaining Courses for Degree</b>	
* 2 Science Electives (a sequence)	8
* 2 Science Electives (a sequence)	8
2 Literature Electives	6
† Math or Liberal Arts Electives	6-8
	<hr/>
AS degree in Liberal Arts	
Minimum Semester Credits	62-66

### Remaining Courses for Degree

\* 2 Science Electives (a sequence)  
 \* 2 Science Electives (a sequence)  
 2 Literature Electives  
 † Math or Liberal Arts Electives

AS degree in Liberal Arts  
 Minimum Semester Credits 62-66

\* "Sequences" in biology, chemistry, physics or physical science must be taken for each of these 2 science requirements. (Recommended: BIO 111, 112; CHM 145, 146; PHY 161, 162; CHM 245, 246.) At least 8 hours must be at the 200 level.

# Courses to be chosen from ANT, ECO, POS, PSY, SOC, SOS designators.

† If the Calculus and Analytic Geometry requirement was met the first year, electives must be Philosophy (6) or Foreign Language (6-8). Higher level math can only be elected by approval of Dean if transfer needs require it.

Students who have not passed Advanced Algebra or its equivalent in high school (usually 3½-4 high school units) should take Algebra and Trigonometry or Pre-Calculus the first year followed by a year of Calculus with Analytic Geometry in the second year. Only if students have the equivalent of Calculus with Analytic Geometry upon entry can they take the non-math elective.

### More Information:

George Higginbottom, LA Dean (Phone 771-5031)

### MENTAL HEALTH

#### AND RETARDATION EMPHASIS

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

Introductory Courses	Credits
ENG 110 Written Expression I	3
PSY 110 General Psychology	3
MAT Mathematics	
(MAT 124 Statistics recommended)	3
HIS 100 Rise of the West	3
<b>Additional Courses for Certificate</b>	
LAB Science (BIO 111 or 131 recommended)	4
ENG 120 Written Expression II	3
SOC 110 Introduction to Sociology	3
PHI Elective	3
LA Elective	3
PSY 223 Intelligence and Mental Retardation	3
	<hr/> 31
<b>Remaining Courses for Degree</b>	
LAB Science (BIO 112 or 132 recommended)	4
PSY 217 Counseling & Interviewing	3
SOS 288 Seminar in Community Social Service Organization	3
PSY 227 Behavior Modification	3
PSY 214 Abnormal Psychology	3
SOS 290 Social Science Field Work	3
Approved Electives in Mental Health & Retardation Emphasis (See page 52)	12

### Remaining Courses for Degree

LAB Science (BIO 112 or 132 recommended)	4
PSY 217 Counseling & Interviewing	3
SOS 288 Seminar in Community Social Service Organization	3
PSY 227 Behavior Modification	3
PSY 214 Abnormal Psychology	3
SOS 290 Social Science Field Work	3
Approved Electives in Mental Health & Retardation Emphasis (See page 52)	12
AS in Liberal Arts (Mental Health & Retardation Emphasis) Minimum Semester Credits	<hr/> 62

### More Information:

Charles Croll, Program Coordinator (Phone 771-5021)

## ASSOCIATE IN OCCUPATIONAL STUDIES

### TOOL & DIE MAKING

**SUGGESTED SEQUENCE:** Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

Introductory Courses		Credits
TDA 111	Blueprint Reading	3
MET 113	Engineering Drawing I	2
MET 114	Engineering Drawing II	2
MAT 139	Algebra	4
MAT 140	Trigonometry	4

#### Additional Courses for Certificate

TDA 113	Survey of Basic Industrial Safety & First Aid	2
TDA 114	Benchmark	2
MET 121	Manufacturing Processes I	3
MET 122	Manufacturing Processes II	2
BUS 255	Industrial and Labor Relations	2
TDA 120	Precision Measurement and Inspection	3
TDA 200	Metallurgy	2
TDA 130	Tool Grinding	2
TDA 140	Production Processes	3

#### Certificate in Machinist Related

Instruction—Minimum Semester Credits		36
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#### Remaining Courses for Degree

TDA 132	Statics	2
TDA 235	Strength of Materials	3
ENG 150	Technical Writing or	
ENG 110	Written Expression I	3
BUS 252	Supervision of Personnel	2
ECO 104	Labor Economics and American Industry	3
EET 181	Installation and Maintenance of Electric Motors	2
TDA 261	Introduction to Quality Control and Inspection	3
TDA 248	Hydraulics and Pneumatics	3
TDA 250	Control Systems	3
TDA 230	Tool Design	4
MET 223	Manufacturing Processes III	2
Associate in Occupational Studies (AOS) in Tool & Die Making		66

#### More Information:

Mechanical Engineering Technology Chairperson (Phone 771-5010) is the program coordinator.

## CERTIFICATE PROGRAMS

### DIETETIC ASSISTANT (Leads to Certificate)

This program is designed for individuals already employed in the food service field, as there is a requirement for supervised work experience by a Registered Dietician. All persons entering the program are responsible for finding a preceptor, and registrations are on a pre-application basis.

	Credits
DIA 101 Nutrition	3
DIA 102 Institution Food Preparation	3
DIA 201 Food Management Systems	3
DIA 202 Personnel Management	3
Apply for Certificate—Dietetic Assistant	12

#### More Information:

Francis J. Short, Chairman (Phone 771-5087)  
Lorraine Gula, Program Coordinator

### LIBERAL ARTS & SCIENCES General Studies Emphasis (Leads to Certificate)

	Credits
English	6
Social Sciences & Humanities	18
Approved Electives	8
Liberal Arts Certificate (General Studies Emphasis)	32

The awarding of this certificate does not necessarily mean the student is a candidate for the Associate in Arts degree. Courses must have approval of the Liberal and General Studies Division, however, to insure that work is appropriate for the Associate in Arts Degree.

#### More Information:

George Higginbottom, LA Dean, 771-5031

**Students desiring less than the full academic experience offered in this program can earn the Machinist Related Instruction Certificate. This consists of completing 36 of the 66 credits listed at left. Students are advised to check with the program coordinator before making this decision.**

### INTERIOR DESIGN (Leads to Certificate)

This is a credit program for individuals interested in a career in interior design or those currently employed in home furnishings or design related fields who would like to obtain greater knowledge and expertise. Those whose interests in design are not job-related are also encouraged to enroll.

Full-time Liberal Arts students are referred to the Interior Design Model for the A.A. degree on page 50.

	Credits
ART 101 Introduction to Art	3
ART 105 Introduction to Design	3
INT 101 History of Architecture—Exterior and Interior	3
*INT 110 Interior Design I	4
*INT 111 Interior Design II	4
INT 120 Construction and Workroom Techniques I	2
INT 121 Specification Writing for Interior Designers	2
INT 130 Rendering	2
INT 140 Fabric Analysis	2
CIV 159 Architectural Drafting I	2
BUS 262 Small Business Management	3
Total	30

\*These courses have prerequisites

#### More Information:

Robert Keller, Program Coordinator (Phone 771-5075)

### GENERAL OFFICE (Leads to Certificate) See page 61

This program can be taken as a full-time one-year program or taken as a part-time program either daytime or evening.

**PART-TIME STUDENTS**



# Center For Community Education

Broome Community College has an extensive non-credit community education program of courses, seminars and special events. The program receives over 5,000 registrations each year in its open enrollment programs, serving the community's career development, cultural, and recreational needs.

## Career Development

This category consists of courses and seminars designed to update professional skills or introduce participants to new career areas. Recent programs have included such courses as Secretarial Refresher, American Management Association courses, Refresher Nursing, and Microprocessor Applications for Engineers, and Industrial Robotics.

## Corporate Service

The Corporate Service Program at Broome Community College is designed to demonstrate the College's commitment to local economic development. The Program's principal mission is to produce quality education and training packages for area corporations.

Course content, materials and presentations are tailored to fit the unique needs of each client. Classes may be scheduled during the more traditional day or evening time frame or around the specific shift schedules of the company. Most employee training programs can take place on the employer's premises, thus minimizing lost employee work time.

Course topics include communication skills, management seminars, safety training, technical programs, personal planning programs.

For additional information on contract education programs, call the Corporate Service Program in the Center for Community Education (771-5056).

## Leisure Time Mini Courses

These are short term courses designed to explore a variety of personal interests, hobbies, crafts and recreational areas. Recent programs have included aerobics, assertiveness, tennis, Singles Night, home decoration, personal investing, and microwave cooking.

## College for Kids

One of the most popular credit-free areas is a program specially designed for kids—from elementary schoolers to high school students. Regular offerings include:

- Computers for Kids
- Drawing for Kids
- Conversational Foreign Languages for Kids
- Science for Kids

Generally these short term offerings are scheduled on Saturday mornings throughout the year.

## Conferences and Seminars

The College conducts workshops and seminars in a variety of topics throughout the year. These are intended to update job skills and explore new fields of interest. Some of the seminars have been for law-enforcement personnel, women seeking jobs and educational information, volunteer firemen, community agencies, and business and industry employees.

## Tour Programs

The College regularly sponsors a variety of charter tours to places such as The Saratoga Performing Arts Center, The Brooklyn Botanical Gardens, St. Maarten's, Florida and Atlantic City.

## Registration

Community Education Programs are offered continuously throughout the year. Free flyers list the course, with their descriptions, times, dates, fees. A form is included in each term's flyer for easy mail-in registration. Registrations are accepted on a first-come, first-served basis.

## Course Development

Programs are a joint effort between Broome Community College faculty, community people, area agencies, organizations and business firms. Groups interested in teaching or co-sponsoring a course are encouraged to discuss the possibilities with the College's Center for Community Education. Many programs offered each year come about because someone suggested them, or a group was concerned about a real need in the community. A teaching interest and course proposal form is available for individuals wishing to teach a particular subject. These forms will be mailed upon request. Call 771-5056.

## Continuing Education Units

Broome Community College awards Continuing Education Units (CEU's) for selected non-credit courses. These Continuing Education Units are offered in response to those students and employers who desire a measurable and understandable record of non-credit educational activities. Courses which carry CEU's and the number of CEU's granted for each course are identified prior to the start of the course.

## Certificate of Participation

Certificates of Participation are given to those participants completing a non-credit course. Many employers fund participation in these courses; information is available in the company's personnel department.

*All courses listed in this section are scheduled to be offered during the 1984-85 academic year, unless otherwise indicated. The offering of any course, however, is subject to sufficient enrollment. Courses numbered from 100 to 199 are generally first-year courses, and those numbered in the 200's are usually taken in the second year.*

## BUSINESS COURSES IN ACCOUNTING, BUSINESS ADMINISTRATION AND MARKETING

### **BUS 100 Accounting I**

**4 Credits**

Introduction to accounting principles and procedures necessary to complete the accounting cycle. How computers can be applied to accounting systems. Emphasis on journals, ledgers, adjustments, financial statements, merchandising, transactions, valuation of inventories, payroll procedures.

**4 Class Hours**

### **BUS 101 Accounting II**

**4 Credits**

Expansion of the fundamental concepts and procedures of accounting. How computers can be applied to accounting systems. Emphasis on internal control, voucher systems and cash transactions, receivables and payables. The acquisition, depreciation and disposal of plant assets. Accounting methods and procedures relating to partnerships and the corporate form of business organizations. Manufacturing with emphasis on the special problems and additional accounting procedures to measure, control and report factory production costs.

**4 Class Hours**

**Prerequisite:** BUS 100 Accounting I

### **BUS 102 Payroll Accounting**

**2 Credits**

A comprehensive study of Federal and State laws and regulations affecting payrolls and payroll taxes. Practical report preparation and reporting requirements. Proper accounting practices to record payroll taxes.

**2 Class Hours**

### **BUS 104 Introduction to Credit Unions**

**3 Credits**

Basic introduction to credit unions by those who have no previous knowledge of these financial cooperatives. Nature of credit unions, their history and philosophy, overview of the structure of the credit union movement and affiliated organizations including the National Credit Union Administration (NCUA). Legal basis for the operation of credit unions, their powers and characteristics including share drafts and VISA cards and the traditional services they offer. Roles and functions of credit union management. The developing financial system and basics of insurance and bonding for credit unions.

**3 Class Hours**

### **BUS 105 Credit Union Financial Operations**

**3 Credits**

The financial management skills needed to operate a credit union, with emphasis upon basic credit union accounting including financial statement analysis and budgeting. Implications of risk management and insurance, along with investment procedures. Marketing and communications. Some bookkeeping experience is recommended as a prerequisite.

**3 Class Hours**

### **BUS 106 Basic Credit Union Operations**

**3 Credits**

Loan granting, financial counseling, collections. Aspects of credit granting skills, loan policies and current regulations concerning the Equal Credit Opportunity Act (ECOA) and truth-in-lending. Financial counseling skills, including interviewing techniques and methods of personal finance. Collection systems and delinquency control, emphasizing written and telephone methods of recovering delinquent accounts. Credit unions and the law.

**3 Class Hours**

### **BUS 110 Introduction to Business**

**3 Credits**

General background of modern business practices through the study of organization and management, production, human resources, accounting and finance, marketing, and the information needed for control and management decisions in business and society.

**3 Class Hours**

### **BUS 112 Quantitative Business Methods**

**2 Credits**

Application of fundamental arithmetic computations to practical business problems. Emphasis on bank records, percentages, markups, cash and trade discounts, overhead distribution, simple interest and negotiable instruments, depreciation, inventory estimation and valuation.

**2 Class Hours**

### **BUS 115 Business Statistics**

**3 Credits**

Concepts and mechanics of measures of central tendency, measures of dispersion, probability, sampling theory, estimation, hypothesis testing, and correlation as they relate to general problems in business and economics.

**3 Class Hours**

### **BUS 117 Business and Society**

**3 Credits**

The role of business in the contemporary world. Increasingly difficult parameters for business despite the growing demands of accountability from government and of social responsibility from consumers. Business values and ethics, the role of business and government, environmental issues and energy policy, business and labor, business and consumer, the influence of multi-national corporations.

**3 Class Hours**

### **BUS 118 Business Law I**

**3 Credits**

Law as an evolutionary and democratic process. Court structure, administrative law, law-of-contracts, legal principles of agency, employment rights and an introduction to partnership.

**3 Class Hours**



<b>BUS 120 Business Law II</b> The law governing the negotiation or transfer of commercial paper and the sale of personal property. The law of personal and real property and sundry topics: bailments, insurance, landlord-tenant relationships, corporate and labor law. <b>3 Class Hours</b> <b>Prerequisite:</b> BUS 118 Business Law I	<b>3 Credits</b>	<b>* BUS 149 Principles of Organization and Management</b> An introduction to the principles, practices and problems of business organizations. A study of the management process—planning organizing, staffing, directing and controlling. (Completing this course will not give students credit for BUS 246 Principles of Management). <b>2 Class Hours</b>	<b>2 Credits</b>
<b>* BUS 125 Real Estate Law</b> For real estate people preparing for the New York State Real Estate Broker's Licensing Examination. Under the supervision of the New York State Department of Licenses. (Credits applicable only to Business program with prior approval from one's academic advisor.) <b>5 Class Hours</b>	<b>5 Credits</b>	<b>* BUS 150 Personnel Administration</b> Techniques and methods to achieve utilization of manpower in business through proper selection, placement, training, job evaluation, wage setting and employee relations. (Completing this course will not give students credit for BUS 249 Personnel Management). <b>2 Class Hours</b>	<b>2 Credits</b>
<b>BUS 129 Consumer Behavior</b> Emphasizes the development of how people make purchase decisions in the market place. Consumer decision-making, learning, brand loyalty and market segmentation. <b>3 Class Hours</b>	<b>3 Credits</b>	<b>BUS 152 Selling Fundamentals</b> Principles of sales with practical application. Steps leading to a successful sale—prospecting, planning and delivering, dramatizing, handling objections, closing, building good will. Development and presentation of a complete procedure for a product or service. Closed-circuit television used to critique sales presentations. <b>3 Class Hours</b>	<b>3 Credits</b>
<b>BUS 131 Personal Finance</b> Guidelines to everyday financial problems regarding budgeting, installment buying, credit, insurance, taxes, savings, investments and purchasing items that require long-term financing such as a home or automobile. <b>3 Class Hours</b>	<b>3 Credits</b>	<b>* BUS 154 Purchasing</b> Analytical approach to techniques employed in the industrial purchasing phase of marketing. Emphasis on the organization of the purchasing functions as an operational unit of the firm directed toward procurement activities. <b>3 Class Hours</b>	<b>3 Credits</b>
<b>* BUS 135 Investments</b> Application of sound investment principles as they relate to stocks and bonds. Importance of the stock markets, their operation and their place in our society. Current happenings such as over-all market behavior, stock splits, rights and offerings are studied in various companies, making the subject matter current and relevant to financial events of the day. A model portfolio approach with weekly review by class participants. <b>2 Class Hours</b>	<b>2 Credits</b>	<b>BUS 165 Insurance</b> Insurance principles and coverage, types of carriers, organizations, history of insurance, analysis of types of coverage available for business and individuals in the casualty and life fields. <b>3 Class Hours</b>	<b>3 Credits</b>
<b>BUS 141 Marketing</b> Introductory study of Marketing as an art and a science. Analysis of the basic principles and practices necessary to complete the marketing cycle effectively. Marketing of goods and services, from conception of the original product idea to delivery to the ultimate consumer. Marketing mix, transportation concept, environmental and societal constraints. Lecture, discussion, cases. <b>3 Class Hours</b>	<b>3 Credits</b>	<b>BUS 166 Property and Casualty Insurance</b> Common policy provisions relating to property and casualty insurance and surety. Topics include automobile liability and physical damage, workmen's compensation, general liability, New York Insurance Law, rating and multi-line coverage. <b>3 Class Hours</b>	<b>3 Credits</b>
<b>* BUS 144 Domestic Transportation</b> Analysis of practices, theories and policies of the transport network. Study of transportation changes—in the locations and movements of goods and people as well as in the physical and institutional organizations (mergers, conglomerates) and their effect on the entire scope of transportation. <b>2 Class Hours</b>	<b>2 Credits</b>	<b>* BUS 170 Insurance for Agents and Brokers</b> Comprehensive survey of insurance. Fire, marine, automobile, owner liability, burglary, boiler, machinery, accident and health, fidelity and surety insurance. Insurance law and duties of the agent. <b>8 Class Hours</b>	<b>8 Credits</b>
<b>* BUS 147 Retail Buying/Merchandising</b> The principles of what, when, where and how to buy in order to successfully purchase a stock of merchandise that can be resold at a profit. Analysis of merchandising mix, stock turns, and elements of effective display. Promotional aspects including point of sale, impulse and window displays. <b>3 Class Hours</b>	<b>3 Credits</b>	<b>BUS 188 Income Tax I</b> Fundamental Federal and New York State income tax rules and regulations for filing personal income tax forms. Gross income inclusions and exclusions, adjustments to income, tax credits, estimated taxes, itemized deductions, penalties and avoidance, amended tax returns. <b>2 Class Hours</b>	<b>2 Credits</b>
		<b>BUS 189 Income Tax II</b> Preparation of supplementary tax forms, such as capital gains, rentals, income averaging, sole proprietorship, self employment taxes, investment credit, corporation tax returns, subchapter S corporations, gift and inheritance taxes. <b>2 Class Hours</b>	<b>2 Credits</b>

**BUS 200 Intermediate Accounting I****4 Credits**

An intensive study of accounting theory and procedures. Emphasis on balance sheet accounts and their interrelationships with income statement accounts. The accounting process and correction of errors. Advanced treatment of cash, receivables, inventories.

**4 Class Hours****Prerequisite:** BUS 101 Accounting II**BUS 201 Intermediate Accounting II****4 Credits**

A more advanced treatment of accounting for fixed assets, intangible assets, current and long-term liabilities. Corporation accounting, funds flow reporting, financial statement analysis.

**4 Class Hours****Prerequisite:** BUS 200 Intermediate Accounting I**BUS 205 Cost Accounting I****4 Credits**

Nature and purpose of cost accounting. Job order and process costing. Accounting for factory overhead and analysis of variances. Accounting for labor and material.

**4 Class Hours****Prerequisite:** BUS 101 Accounting II**BUS 206 Cost Accounting II****4 Credits**

Further consideration of cost accounting principles, standard costs and variances. The construction of budgets, profit planning. Flexible budgets. Direct costing. Break even analysis. Accounting for by-products and joint products. Non-manufacturing costs.

**4 Class Hours****Prerequisite:** BUS 205 Cost Accounting I**\* BUS 207 Managerial Accounting I****2 Credits**

Use of accounting information by management in decision making. Accounting procedures for the evaluation of performance and responsibility accounting in business and industry.

**2 Class Hours****\* BUS 208 Managerial Accounting II****2 Credits**

Relationship of accounting information to such areas of managerial responsibilities as planning and control, cash budgeting and cash flow, relevant cost analysis, profit planning and the effects of price level changes.

**2 Class hours****Prerequisite:** BUS 207 Managerial Accounting I**BUS 220 Financial Information Systems****3 Credits**

Development of practicable accounting systems to provide the information required for effective managerial control. Techniques of flow charting, developing written procedures, analysis of organization structures, form design applied to the basic area of business.

**2 Class Hours, 2 Laboratory Hours****Prerequisite:** BUS 101 Accounting II and CST 110 Introduction to Data Processing**\* BUS 221 Mathematics for Business Analysis****2 Credits**

Basic quantitative mathematical methods for management. Techniques and their application to business problems. Foundation for further study of advanced principles of quantitative analysis.

**2 Class Hours****Prerequisite:** BUS 112 Quantitative Business Methods**BUS 224 Business Finance****3 Credits**

Financial principles and procedures of capital management. Analysis of the relationship of finance to micro and macro economic factors such as inflation business cycles, competition, regulation. Emphasis on corporate goals and objectives as a determining factor in the choice of financial management policy. Application of financial ratios, cash budgeting, forecasting, leverage, working capital policy, capital markets, stock and bonds, valuation, and other basic areas of finance.

**3 Class Hours****\* BUS 226 Credit and Collections****3 Credits**

Nature and role of credit, credit management, types of credit, credit department organization, credit reports and investigation, collection procedures, investigation and analysis of mercantile and financial institution credit risks, analysis of financial statements. It is suggested that BUS 100 Accounting I be taken prior to this course.

**3 Class Hours****BUS 229 Advertising****4 Credits**

Development, economies, functions of advertising. Cost application, media, testing and research methods. Development of advertisements, copy and layout, methods and problems of reproduction. Planning the advertising campaign with step by step developments. Lectures, discussions, demonstrations. BUS 141 Marketing is recommended as preparation for this course.

**4 Class Hours****\* BUS 238 Marketing Research****3 Credits**

Methods of collecting and interpreting marketing information which affect marketing management. Specific applications to problem identification in market development, gauging market potential and implementation of research designs in the market place. It is suggested that BUS 115 Business Statistics be taken prior to this course.

**3 Class Hours****BUS 242 Marketing Seminar****3 Credits**

Senior capstone course which integrates various business subjects previously studied. Individual and team approach to analysis of comprehensive marketing and management cases and cooperative consideration of alternative decisions to problem solving. For non-Marketing majors.

**3 Class Hours****Prerequisite:** Permission of Chairperson of Business Department**\* BUS 243 Industrial Management****2 Credits**

Fundamentals of organization and management of industrial concerns. Emphasis upon leadership, human behavior, analysis in decision making. Examination of problem solving in industrial enterprises and applying management principles. (Completing this course will not give students credit for BUS 246 Principles of Management).

**2 Class Hours****BUS 245 Management: A Behavioral Approach****3 Credits**

A comprehensive analysis of managerial theories and an integration of selected social sciences to investigate organizational problems related to managerial functions. Impact of the organizational environment and work groups upon human behavior.

**3 Class Hours****\* BUS 246 Principles of Management****3 Credits**

Principles of managerial practices. Planning, organizing, directing, and controlling. Exposes students to proper methods and techniques to achieve employee and job satisfaction. Topics covered include scientific management, behavioral theory, and introduction to management science.

**3 Class Hours****\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**



- \* BUS 247 Sales Management**
**3 Credits**

Development of control techniques in the administration of sales forces. Incentive systems, territory planning, development of sales potentials, personnel problems peculiar to this field.

**3 Class Hours**
- BUS 249 Personnel Management**
**3 Credits**

Principles of managerial practices. The four functions of management—planning, organizing, directing and controlling. Designed to expose the student to the proper methods and techniques to achieve employee and job satisfaction. Processing, developing, maintaining and proper utilizing of the labor force. A review of the history and impact of organized labor incorporating economic, political and social pressures which influence employment. Effective interview poise, personal appearance, interviewing techniques, job opportunities and placement services. Correct preparation of a resume and the utilization of references.

**3 Class Hours**
- \* BUS 252 Supervision of Personnel**
**2 Credits**

Concepts and psychology of personnel supervision. Emphasis on the application of management theory through use of case studies and classroom discussions.

**2 Class Hours**
- BUS 253 Selling Fundamentals**
**3 Credits**

Principles of sales with practical applications. Steps leading to a successful sale—prospecting, planning and delivering, dramatizing, handling objections, closing, building goodwill. Development and presentation of a complete procedure for a product or service. Closed-circuit television used to critique sales presentations.

**3 Class Hours**
- \* BUS 255 Industrial Labor Relations**
**2 Credits**

Processes of bargaining and contract administration between industrial employers and unions representing employees, as a system of compromising opposing objectives and settling differences. Origins of unions, how they organize and gain recognition and how the labor agreement is negotiated and administered. Interaction among employees, stewards and supervisors. Labor laws. Institutions such as the National Labor Relations Board, mediation services, arbitration boards and courts. (Completing this course will not give students credit for BUS 256 Labor Relations for Business and Industry).

**2 Class Hours**
- BUS 256 Labor Relations for Business and Industry**
**3 Credits**

Analysis of labor relations and collective bargaining procedures. Policies of organized labor, employers and government in solving labor-management disputes. Grievance procedure, wage and price policies, arbitration, mediation, negotiations and labor contracts.

**3 Class Hours**
- \* BUS 257 Organizational Behavior**
**3 Credits**

Processes affecting the behavior of individuals and groups are examined with particular attention to their managerial implications. Relevant concepts and research evidence help students to analyze their experiences and generalize from them. Similarities and differences among effective organizational structures and managerial strategies in the public, private and non-profit sectors.

**3 Class Hours**
- \* BUS 258 Human Relations in Business**
**2 Credits**

Basic psychological principles applied to the problems of employee selection, training, evaluation, merit rating and advancement. Social interaction and human relations in industry. Motivation concepts and techniques, job satisfaction, morale, conference leadership and employee and management development.

**2 Class Hours**

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**

- BUS 259 Business Report Writing**
**3 Credits**

Training in logic analysis of business cause problems, applied to the preparation of accurate written reports. Methods and skills in formal and informal business writing. Preparation of tables, charts, reference citations, and bibliographies. Improvement of basic business writing skill involved in interoffice memos, letters of adjustment, bids, quotations, public relations.

**3 Class Hours**
- \* BUS 260 Management of Physical Distribution—Transportation**
**2 Credits**

Rates, documentation and career liability (legal implications), factors in routing transportation in the milieu of physical distribution and current issues in the field.

**2 Class Hours**

**Prerequisite:** BUS 144 Domestic Transportation
- BUS 261 Office Management**
**2 Credits**

A comprehensive study of modern management principles and practices in office organization, operation and control. Office layout, personnel, office equipment, processing of information and the planning, flow and measurement of work within the office.

**2 Class Hours**
- BUS 262 Small Business Management**
**3 Credits**

Designed for those interested in small business as owner-managers. Development of modern management techniques covering forms of organization, site acquisition and location, insurance, marketing, financing, pricing, breakdown, permits, licenses and franchising.

**3 Class Hours**
- BUS 264 Retailing**
**3 Credits**

Fundamentals of purchasing, merchandising, pricing, promotion. Principles of retail management. Coordination of accounting and basic marketing concepts at the market focal point.

**3 Class Hours**
- BUS 270 Decision Making**
**3 Credits**

An introduction to managerial problems relating to the planning and controlling functions, which provide guidelines to making rational decisions. A realistic approach utilizing cases and simulation is taken to expose the student to quantitative as well as subjective analysis to point out the constraints placed upon management.

**3 Class Hours**

**Prerequisite:** BUS 115 Business Statistics
- BUS 295 Accounting Seminar**
**4 Credits**

In-depth treatment of accounting for payroll taxes followed by actual completion of required state and federal tax forms. Thorough coverage of the Individual Tax Form 1040, schedules A, B, C, D, E and G, small business taxes, schedules C, SE, and investment credit, Corporate Tax Form 1120. Accounting concepts and current trends in accounting as reflected through financial statement analysis.

**4 Class Hours**
- BUS 297 Cooperative Work Experience**
**1-3 Credits**

Cooperative education is available to students in the marketing management, marketing sales and accounting curriculums. On-the-job experience may be obtained in such areas as retailing, banking, fast foods, government services and hotel management, as well as in CPA firms, public accounting offices, industrial, business and government offices where accounting is performed. Cooperative work students will meet with the coordinator one hour each week.

**Prerequisite:** Full-time student (minimum of 12 credit hours) maintaining an over-all cumulative grade-point average of 2.5, with 3.00 in Business courses and no F's.
- BUS 299 Independent Study**
**1-4 Credits**

The student, under the guidance of a faculty member, undertakes an investigation, study and research in an advanced concept or problem concerning his/her major field of study. Only one independent study course is allowed per semester.

**Prerequisite:** Approval of Faculty Member and Department Chairperson

**BUS 360 Establishing a Small Business****1 Credit**

Designed for those who wish to establish their own business as owner-managers. Discussion of modern techniques concerning location, site acquisition, franchising, forms of organization, financing, and permits and licenses.

**1 Class Hour****BUS 361 Operating a Small Business****1 Credit**

Designed for those who wish to operate or are currently running their own business. Development of modern management techniques covering pricing, promotion, product strategies, financial analysis, and insurance.

**1 Class Hour****\* BUS 362 Record Keeping in a Small Business****1 Credit**

Designed for those interested in small business as owner-managers. An in-depth treatment of fundamentals of the accounting process, evaluating the financial health of the business, regulations and taxes affecting the small business and using the computer in operating the small business.

**3 Class Hours (5 weeks)****ANTHROPOLOGY****ANT 110 Physical Anthropology and Archaeology****3 Credits**

Introduction to human evolution, variation and prehistory. The Darwinian Revolution, mechanisms of evolution, the fossil record, domestication of plants and animals, the rise of civilization. Prehistory topics may include Americas, Africa, Middle East, Asia.

**3 Class Hours****ANT 111 Cultural Anthropology****3 Credits**

Introduction to the study of culture as the behavioral adaptation unique to human societies. Cultural characteristics shared by all humans and major variations found among specific groups. Explanations for rules of social interaction in common activities, the social functions of institutions such as marriage and kinship, the ecological basis of many institutions, language as a culturally defined system of communication, modernization in our own and third world societies.

**3 Class Hours****ANT 299 Independent Study****1-3 Credits**

An individual student project in anthropology which is beyond the scope of requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.

**Prerequisite: 3 semester hours in Anthropology****ART****ART 101 Fine Arts: Introduction to Art****3 Credits**

Basic art principles and concepts together with their historical development as shown in representative works of painting, sculpture and architecture. Gallery visits.

**3 Class Hours****ART 105 Introduction to Design****3 Credits**

Introduction to various elements of two-dimensional design (color, composition, texture).

**2 Class Hours, 2 Studio Hours****ART 106 Introduction to Three-Dimensional Design****3 Credits**

Exploration of esthetic and functional elements of three-dimensional design through studio projects and architectural forms and space. Projects in wood, paper, pigment, twine, plaster of Paris.

**2 Class Hours, 2 Studio Hours****ART 115 Drawing****3 Credits**

Intensive drawing instruction in charcoal, pencil, pen and ink, pastel and mixed media, life drawing, still-life composition.

**6 Studio Hours****ART 116 Painting I****3 Credits**

Beginning painting instruction and practice in techniques of oil painting, still-lives, landscapes.

**6 Studio Hours****Prerequisite: ART 115 Drawing or Instructor's permission****ART 120 Sculpture Fundamentals****3 Credits**

Abstract elements of sculptural form as revealed through analysis of student work and historical examples. Emphasis on developing the student's ability to utilize concepts in practice and to expand his/her understanding of the general function of form as symbolic structure. (Not offered in 1984-85 academic year).

**6 Studio Hours****ART 130 Pottery****3 Credits**

Study of the basic processes of the design and creation of ceramics, both functional and sculptural. Fundamentals of hand-building, potter's wheel, glazing and firing.

**6 Studio Hours****ART 140 Printmaking****3 Credits**

Three equal parts to course—linecut, woodcut, monotype. Explanation, uses, technical demands, potential and limitation of each process. Students to develop images for blocks or plates.

**6 Studio Hours****ART 215 Painting II****3 Credits**

Continuation of painting instruction and practice done in ART 116 Painting I.

**6 Studio Hours****Prerequisite: ART 116 Painting I or instructor's permission****ART 216 Painting III****3 Credits**

Painting from costumed model; advanced composition devices.

**6 Studio Hours****Prerequisite: ART 116 Painting II or instructor's permission****ART 220 Life Sculpture****3 Credits**

The principles of abstract form applied to the human body, and the expressive possibilities of the human figure explored. Studies of actual models in oil-base clay later to be cast into plaster or carved in wood or stone. (Not offered in 1984-85 academic year.)

**6 Studio Hours****Independent Study: Art****1-3 Credits****ART 297 Sculpture****ART 299 Art History**

An individual student project concerned with advanced work in a specific area of art. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

**Prerequisite: 3 semester hours of college level work in Art.****\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**



## BIOLOGY

### BIO 111 General Biology I

**4 Credits**

Principles of evolution and ecology as unifying themes in biology. Evolutionary processes and ecological adaptations illustrated by plant and animal diversity. The community of cellular life processes. Current environmental problems. The laboratory includes rigorous field trips.

**3 Class Hours, 3 Laboratory Hours**

### BIO 112 General Biology II

**4 Credits**

Principles of evolution and ecology as unifying themes in biology. The human animal and its systems. Concepts of animal behavior. Classical genetics, current concepts of gene function and human genetics. Organismal growth and development. Current environmental problems. The laboratory includes rigorous field trips.

**3 Class Hours, 3 Laboratory Hours**

### BIO 120 Human Sexuality

**3 Credits**

Explores information about sexual attitudes, relationships, sexual anatomy, contraception, venereal disease. Course aims to make students feel more comfortable thinking and talking about sex and to prepare them to make rational decisions about this important aspect of their lives.

**3 Class Hours**

### BIO 131 Human Biology I

**4 Credits**

Normal structure (gross and microscopic) and function of the skeletal, muscular and nervous systems. Emphasis on physiology in lectures and on anatomy in laboratory, stressing those aspects which have greatest relevance to the student's curriculum.

**3 Class Hours, 2 Laboratory Hours**

### BIO 132 Human Biology II

**4 Credits**

A continuation of BIO 131 Human Biology I covering the circulatory, respiratory, digestive, urinary, reproductive and endocrine systems. Emphasis on physiology in lectures and on anatomy in laboratory, stressing those aspects which have greatest relevance to the student's curriculum.

**3 Class Hours, 2 Laboratory Hours**

**Prerequisite:** BIO 131 Human Biology I or permission of instructor

### BIO 140 Pathophysiology

**3 Credits**

Symptoms, syndrome and etiology of pathogenic processes affecting the function and structure of the body.

**3 Class Hours**

**Prerequisite:** BIO 132 Human Biology II

### BIO 150 Microbiology I

**4 Credits**

The biology of the common bacteria and related microorganisms. General microbiology including asepsis, disinfection, sterilization, cultivation, pathogenicity, resistance, identification.

**3 Class Hours, 3 Laboratory Hours**

### BIO 160 Microbiology

**3 Credits**

Position of microorganisms in the biological world, as well as their cultivation and identification. Asepsis, disinfection and sterilization. Disease transmission and the human elements in defense. For Medical Office Assistant and Dental Hygiene students.

**2 Class Hours, 3 Laboratory Hours**

### BIO 170-199 Special Topics in Biology

**1-2 Credits**

Special courses covering particular topics in the biological sciences beyond the scope of the normal course offerings.

### BIO 171 Physiology of Exercise

**1 Credit**

Designed to develop an understanding and appreciation for the role of consistent exercise in maintaining good health. The interrelationship of the muscular, cardiovascular, respiratory and digestive systems and the net effect of training on these systems.

**1 Class Hour**

### BIO 205 Aquatic Ecology

**4 Credits**

A study of how light, temperatures and water chemistry influence the plants and animals which live in ponds, lakes, rivers and estuaries. Current and future ecology. Local, regional and national water related problems including pollution, waste water treatment, ground water contamination, acid rain, water recycling, salt water encroachment, wetland destruction.

**3 Class Hours, 2 Laboratory Hours**

**Prerequisites:** Senior status, one year college science or permission of instructor

### BIO 299 Independent Study

**1-3 Credits**

An individual student project in a biological field which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson. Independent Study is available to students who have completed a minimum of 3 semester hours of biology.

## CHEMISTRY AND CHEMICAL ENGINEERING TECHNOLOGY

### CHM 102 Preparatory Chemistry

**4 Credits**

Introductory course in chemistry emphasizing problem-solving techniques related to chemical concepts. Atomic structure, stoichiometry, metric units, chemical bonding, chemical nomenclature, solution chemistry.

**4 Class Hours**

### CHM 120 Fundamental Chemistry

**4 Credits**

First course for Fire Protection Technology, Health Sciences and Criminal Justice students. Composition of substances, atomic structure, periodicity, bonding, chemical equations, states of matter, aqueous solutions, chemical equilibria and introduction to organic chemistry.

**3 Class Hours, 3 Laboratory Hours**

### CHM 121 Forensic Sciences

**4 Credits**

Introduction to forensic chemistry for Criminal Justice students. Examination of firearms, cartridges, explosives, drugs and other types of physical evidence. Emphasis on proper handling of substances found in crime scene investigations. Laboratory techniques include many modern instrumental methods, such as gas chromatography, infrared and mass spectroscopy.

**3 Class Hours, 3 Laboratory Hours**

**Prerequisite:** CHM 120 Fundamental Chemistry or permission of department

### \*CHM 125 Chemistry

**3 Credits**

Fundamental concepts of inorganic chemistry. Composition of substances, kinetic and molecular theories, atomic structure and bonding, solutions and colloids, ions in solution and introduction to organic chemistry. For Fire Protection Technology students.

**2 Class Hours, 3 Laboratory Hours**

### CHM 131 Chemistry

**3 Credits**

Fundamental concepts of general inorganic chemistry. Stoichiometry, atomic structure, periodicity, chemical bonding, kinetic theory, states of matter, acids, bases and chemical equilibria. For Medical Laboratory Technology students.

**3 Class Hours**

**Corequisite:** CHM 131L Chemistry Laboratory

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**

**CHM 131L Chemistry Laboratory****1 Credit**

Experiments illustrating concepts from lecture and important laboratory techniques with strong emphasis on careful, accurate recordkeeping. A number of the experiments are qualitative, the rest quantitative.

**3 Laboratory Hours****Corequisite:** CHM 131 Chemistry**CHM 132 Chemistry****3 Credits**

A continuation of CHM 131 Chemistry including chemical equilibria, coordination chemistry and extensive treatment of classical quantitative analysis. For Medical Laboratory Technology students.

**3 Class Hours****Prerequisites:** CHM 131 Chemistry and CHM 131L Chemistry Laboratory**Corequisite:** CHM 132L Chemistry Laboratory**CHM 132L Chemistry Laboratory****1 Credit**

Experiments illustrating concepts from lecture, including eight weeks of classical volumetric analysis and experiments involving chemical equilibrium and colligative properties of solutions. Emphasis on careful, accurate recordkeeping.

**3 Laboratory Hours****Prerequisites:** CHM 131 Chemistry and CHM 131L Chemistry Laboratory**Corequisite:** CHM 132 Chemistry**CHM 141 General Chemistry****3 Credits**

Application of chemical principles to evaluate important scientific and technological issues in our complex society. Energy sources: coal, gas, petroleum, solar, geothermal. Radioactivity, effects of radiation, nuclear weapons. Man's effect on the climate, warming and the greenhouse effect, atmospheric particles, supersonic transport, weather modifications. For Liberal Arts non-science students.

**3 Class Hours****Corequisite:** CHM 141L General Chemistry Laboratory**CHM 141L General Chemistry Laboratory****1 Credits**

Experimentation to introduce techniques in the laboratory while increasing awareness of the chemical world and to attain some insight into how a chemist attacks a real problem. Qualitative and quantitative measurements.

**3 Laboratory Hours****Corequisite:** CHM 141 General Chemistry**CHM 142 General Chemistry****3 Credits**

A continuation of CHM 141 General Chemistry. Chemistry of the air, water and land environment. Chemicals in the internal environment: food and drugs. Consumer chemistry. Basic concepts of organic chemistry, polymers and plastics, natural and synthetic organic medicinal compounds, legislation of food additives, regulation of carcinogens, chemistry of living systems. For Liberal Arts non-science students.

**3 Class Hours****Prerequisite:** CHM 141 General Chemistry**Corequisite:** CHM 142L General Chemistry Laboratory**CHM 142L General Chemistry Laboratory****1 Credit**

A continuation of CHM 141L General Chemistry Laboratory. Laboratory experimentation to substantiate classroom lectures: water hardness, preparation of aspirin, soaps and detergents, dyes, plastics, etc.

**3 Laboratory Hours****Prerequisite:** CHM 141L General Chemistry Laboratory**Corequisite:** CHM 142 General Chemistry**CHM 145 Chemistry****3 Credits**

A comprehensive treatment of general chemistry for the science-oriented student emphasizing the quantitative relationships in chemical reactions and the current atomic and bonding theories explaining chemical phenomena. Periodicity, writing, balancing and interpretation of chemical equations, stoichiometric calculations based on equations, solution stoichiometry. Laws governing physical states and changes in state, physical properties of solutions. For Engineering Science and Liberal Arts science majors.

**3 Class Hours****Prerequisite:** Regents Chemistry or CHM 102 Preparatory Chemistry**Corequisite:** CHM 145L Chemistry Laboratory**CHM 145L Chemistry Laboratory****1 Credit**

Laboratory experiments to reinforce the fundamental principles discussed in lecture.

**3 Laboratory Hours****Corequisite:** CHM 145 Chemistry**CHM 146 Chemistry****3 Credits**

Continuation of CHM 145 Chemistry including chemical thermodynamics, kinetics, acid-base theory, chemical equilibrium, equilibria in aqueous solution and electro-chemistry. For Engineering Science and Liberal Arts science majors.

**3 Class Hours****Prerequisite:** CHM 145 Chemistry**Corequisite:** CHM 146L Chemistry Laboratory**CHM 146L Chemistry Laboratory****1 Credit**

A continuation of CHM 145L Laboratory. Emphasis is placed on pH and spectrophotometric instruments and techniques.

**3 Laboratory Hours****Prerequisite:** CHM 145L Chemistry Laboratory**Corequisite:** CHM 146 Chemistry**CHM 161 Chemistry****3 Credits**

Basic concepts underlying chemical action emphasizing measurement, basic chemical calculations, atomic structure and the periodic law. Chemical bonding, states of matter, solutions, kinetic/molecular theories, chemical equilibrium and energy changes in chemical reactions.

**3 Class Hours****Prerequisite:** Regents Chemistry or CHM 102 Preparatory Chemistry**Corequisite:** CHM 161L Chemistry Laboratory**CHM 161L Chemistry Laboratory****1 Credit**

Experiments illustrating concepts from lecture. Emphasis on keeping a laboratory notebook and on laboratory skills required for the chemical laboratory. Exercises mostly quantitative in nature.

**3 Laboratory Hours****Corequisite:** CHM 161 Chemistry**CHM 162 Chemistry****3 Credits**

A continuation of CHM 161 Chemistry. Oxidation-reduction and electrochemistry, acids, bases and salts. Solubility product principle, acid/base equilibrium, thermodynamics. Principles of qualitative analysis.

**3 Class Hours****Prerequisite:** CHM 161 Chemistry and CHM 161L Chemistry Laboratory**Corequisite:** CHM 162L Chemistry Laboratory**CHM 162L Chemistry Laboratory****1 Credit**

Experiments illustrating concepts from lecture, including seven weeks of semi-micro qualitative analysis. Emphasis on laboratory skills and notebookkeeping.

**3 Laboratory Hours****Prerequisites:** CHM 161 Chemistry and CHM 161L Chemistry Laboratory**Corequisite:** CHM 162 Chemistry



**CHM 221 Organic Chemistry****3 Credits**

Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthesis and spectroscopy. The laboratory emphasizes techniques of separation, identification and purification by classical methods and instrumental methods such as gas chromatography and spectroscopy. For Medical Laboratory Technology students.

**2 Class Hours, 3 Laboratory Hours****Prerequisite:** CHM 132 Chemistry**CHM 222 Organic Chemistry****3 Credits**

A continuation of CHM 221 Organic Chemistry including a study of the structure, reactivity and stereochemistry of biomolecules and medicinally active compounds. Laboratory includes multi-step synthesis of pharmaceuticals and selected experiments with biomolecules.

**2 Class Hours, 3 Laboratory Hours****Prerequisite:** CHM 221 Organic Chemistry**CHM 224 Instrumental Analysis****4 Credits**

Theory and laboratory instruction in electrochemical, optical, nuclear methods of analytical chemistry, including potentiometry, polarography, coulometry, conductimetry, liquid scintillation counting, gamma spectrometry. Ultraviolet-visible, infrared, atomic absorption spectrophotometry. GC-mass spectrometry, thermal analysis, carbon-hydrogen-nitrogen analysis, gas chromatography, ion chromatography, high performance liquid chromatography. For Medical Laboratory Technology students.

**2 Class Hours, 6 Laboratory Hours****Prerequisite:** CHM 132 Chemistry**CHM 245 Organic Chemistry****3 Credits**

A fundamental treatment of organic chemistry. Organic nomenclature, chemical properties of selected functional groups, mechanisms, stereochemistry and synthetic methods. For Liberal Arts science majors and Engineering Science students with departmental approval.

**3 Class Hours****Prerequisite:** CHM 146 Chemistry**Corequisite:** CHM 245L Organic Chemistry Laboratory**CHM 245L Organic Chemistry Laboratory****2 Credits**

Basic techniques of separation and purification such as recrystallization, distillation, extraction, chromatography, modern instrumental techniques. Introduction to modern organic synthesis.

**4 Laboratory Hours****Corequisite:** CHM 245 Organic Chemistry**CHM 246 Organic Chemistry****3 Credits**

A continuation of CHM 245 Organic Chemistry including spectroscopy and introduction to molecules of biological importance.

**3 Class Hours****Prerequisite:** CHM 245 Organic Chemistry**Corequisite:** CHM 246L Organic Chemistry Laboratory**CHM 246L Organic Chemistry Laboratory****2 Credits**

A continuation of CHM 245L Organic Chemistry Laboratory including an introduction to complex multi-step synthesis and qualitative organic analysis by classical and modern instrumental techniques.

**4 Laboratory Hours****Prerequisite:** CHM 245 Organic Chemistry and CHM 245L Organic Chemistry Laboratory**Corequisite:** CHM 246 Organic Chemistry**CHM 261 Organic Chemistry****3 Credits**

A systematic study of the families of organic chemistry, including concepts of bonding, equilibria, reaction kinetics, energy profiles, isomerism and synthesis. Families viewed with emphasis on nomenclature, structural features, preparations, reaction products and uses.

**3 Class Hours****Prerequisite:** CHM 162 Chemistry**Corequisite:** CHM 261L Organic Chemistry Laboratory**CHM 261L Organic Chemistry Laboratory****2 Credits**

Experiments include separation techniques, identification using instrumentation (infra-red spectroscopy, gas chromatography) and syntheses.

**6 Laboratory Hours****Corequisite:** CHM 261 Organic Chemistry**CHM 262 Organic Chemistry****3 Credits**

Continuation of CHM 261 Organic Chemistry. Mass spectroscopy and nuclear magnetic resonance. Special topics including heterocyclic compounds, polymers, biomolecules.

**3 Class Hours****Prerequisite:** CHM 261 Organic Chemistry**Corequisite:** CHM 262L Organic Chemistry Laboratory**CHM 262L Organic Chemistry Laboratory****2 Credits**

Emphasis on qualitative organic chemistry. Identification of unknowns.

**6 Laboratory Hours****Prerequisite:** CHM 261L Organic Chemistry Laboratory**Corequisite:** CHM 262 Organic Chemistry**CHM 265 Instrumental Methods of  
Chemical Analysis****3 Credits**

Principles and techniques of modern quantitative analysis including treatment of analytical data, sampling, solution adjustment, chelatometry, redoximetry, aqueous and non-aqueous acid-base titrations, electrophoresis and isoelectric focusing, ion-exchange, ion chromatography, conductimetry, coulometry, electrogravimetry, polarography, amperometry, potentiometry, radioisotope methodology. For Chemical Engineering Technology and Liberal Arts "chemical model" students.

**3 Class Hours****Prerequisite:** 1 full year of college general chemistry and MAT 142 Applied Calculus I and PHY 142 Physics**Corequisite:** CHM 265L Instrumental Methods of Chemical Analysis Laboratory**CHM 265L Instrumental Methods of  
Chemical Analysis Laboratory****2 Credits**

Application of chelometric, redox, precipitometric, aqueous and non-aqueous acid-base methods for chemical analysis of organic and inorganic compounds. Operation of polarographs, conductimeters, potentiometers, coulometers, and electroanalyzers for applications in electrochemical methods of analysis. Operation of a microprocessor controlled liquid scintillation counter, gamma spectrometer, and Geiger-Müller counter for applications in radioisotope methodology. Statistical evaluation of data obtained by the various analytical methods. For Chemical Engineering Technology and Liberal Arts "chemical model" students.

**6 Laboratory Hours****Prerequisite:** 1 full year of college general chemistry and MAT 142 Applied Calculus I and PHY 142 Physics**Corequisite:** CHM 265 Instrumental Methods of Chemical Analysis

**CHM 266 Instrumental Methods of Chemical Analysis 3 Credits**

Principles and techniques of modern instrumental methods of chemical analysis including ultraviolet, visible, infrared, nuclear magnetic resonance, atomic absorption, emission and mass spectroscopy. Column, thin-layer, gel permeation, gas and liquid-liquid chromatography. Chemical microscopy and differential thermal analysis. For Chemical Engineering Technology students.

**3 Class Hours**

**Prerequisite:** CHM 265 Instrumental Methods of Chemical Analysis

**Corequisite:** CHM 266L Instrumental Methods of Chemical Analysis Laboratory

**CHM 266L Instrumental Methods of Chemical Analysis Laboratory 2 Credits**

Analysis by optical, separations, thermal techniques, trace methods applied to contemporary, industrial and environmental problems.

**6 Laboratory Hours**

**Prerequisite:** CHM 265 Instrumental Methods of Chemical Analysis

**Corequisite:** CHM 266 Instrumental Methods of Chemical Analysis

**CHM 271 Chemical Process 5 Credits**

Material and energy balances along with applied chemical and physical principles as they apply to chemical engineering. Emphasis on problem-solving in the classroom and engineering reports in the laboratory.

**3 Class Hours, 4 Laboratory Hours**

**Prerequisites:** CHM 162 Chemistry and MAT 142 Applied Calculus I and PHY 142 Physics

**CHM 272 Chemical Processes 5 Credits**

Staged operations dealing with phase equilibrium. Graphical, analytical and computer methods are used to solve unit operations problems. The laboratory emphasizes engineering reports.

**3 Class Hours, 4 Laboratory Hours**

**Prerequisite:** CHM 271 Chemical Processes

**CHM 290 Forensic Toxicology 3 Credits**

Application of the principles of forensic toxicology and the related forensic sciences within the scope of medical-legal investigation. Drug and poison analysis, examination of physical evidence and death investigation. Optional laboratory sessions will provide basic knowledge of forensic analysis utilizing microscopy, gas chromatography, thin layer chromatography and spectroscopy.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** CHM 120 Fundamental Chemistry or a semester of General Chemistry or permission of instructor

**\*CHM 291 Organic Chemistry I 3 Credits**

**\*CHM 292 Organic Chemistry II 3 Credits**

Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthetic methods and spectroscopy. The laboratory stresses basic techniques of reactions, separations and isolation by classical methods as well as modern instrumental techniques.

**2 Class Hours, 3 Laboratory Hours each**

**Prerequisites:** CHM 146 Chemistry for CHM 291

CHM 291 Organic Chemistry I for CHM 292

**\*CHM 293 Analytical-Instrumental Chemistry I 3 Credits**

Classical analytical chemistry—sampling, statistics, gravimetric and volumetric analysis. Introduction to electrochemistry.

**2 Class Hours, 3 Laboratory Hours**

**Prerequisite:** CHM 146 Chemistry

**\*CHM 294 Analytical-Instrumental Chemistry II 3 Credits**

Continuation of CHM 293 Analytical-Instrumental Chemistry I. Additional electrochemistry and electrochemical techniques. Emphasis on spectroscopic and chromatographic methods. Visible, infrared and nuclear magnetic resonance spectroscopy. Gas, liquid, column and thin layer chromatography.

**2 Class Hours, 3 Laboratory Hours**

**Prerequisite:** CHM 293 Analytical-Instrumental Chemistry I

**CHM 299 Independent Study 1-4 Credits**

The student undertakes an independent project in his/her specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.

**Prerequisite:** Departmental approval

## CHILD CARE

Child Care (CDC) courses may not be used to satisfy the Social Science requirement.

*The Child Care program was developed with great flexibility in course selection and can be taken on a part-time basis by those individuals currently employed in the field. Those students who wish to pursue it on a full-time basis should contact the program Coordinator of Child Care. Very close planning and advisement will be necessary to pursue this program to its completion in two years.*

**MOST CHILD CARE COURSES (THOSE WITH CDC DESIGNATION) ARE OFFERED ONLY IN THE EVENING. FULL-TIME CHILD CARE STUDENTS MUST PLAN FOR BOTH DAY AND EVENING CLASSES.**

**\*CDC 100 Introduction to Education of Young Children 3 Credits**

An over-all view of nursery education and where it is going. Discussion of various philosophies and methods, programming, scheduling (what should go into scheduling a day for a pre-schooler and when). Focus on social, emotional and physical needs of young children and the importance of the "self concept" for both the child and the adult working with young children. Introduction to the college's Child Care program covering requirements, courses and career information. A required number of observations in pre-schools, nurseries and day care centers in the area, as well as a special laboratory project. Required of Child Care majors.

**2 Class Hours, 2 Laboratory Hours**

**\*CDC 115 Music for Young Children 3 Credits**

How to develop the whole child through the use of music. This course will be of a practical application for the teacher. Various techniques and method will be demonstrated through the use of songs, records, eurhythmics, rhythm instruments and creative activities. Class participation will be a vital part of this course. Students will be expected to apply these various methods and activities with young children.

**3 Class Hours**

**\*CDC 120 Curriculum Development 3 Credits**

A pre-school curriculum for students planning to work in day-care centers and nursery schools. Emphasis on how art, language, math, creative play, science and outdoor play programs are used for the physical, social, emotional and mental development of the young child. Sharing and implementing ideas through special projects and construction and implementation of material related to specified areas. Students will be required to perform certain activities in a nursery school setting or with groups of children. Required of Child Care majors.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** CDC 100 Introduction to Education of Young Children

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**



**\* CDC 140 Art for Young Children 3 Credits**

In-depth coverage of art education as it contributes to the pre-school child's emotional, physical and psychological growth. Needs of pre-schoolers in this area and ways to foster creativity and skill acquisition. Materials and methods appropriate for this age. A laboratory experience working with pre-schoolers in art will be required.

**2 Class Hours, 2 Laboratory Hours**

**\* CDC 150 Motor Development 3 Credits**

Designed to give the student an understanding of normal motor development and how it relates to cognitive and perceptual development. Students will be exposed to programs and activities in motor development for young children.

**3 Class Hours**

**\* CDC 160 Nutrition for Young Children 3 Credits**

Basics of good nutrition with emphasis on children. Ideas on planning and preparing snacks and meals and teaching good nutrition habits to children. Ideas on fitting nutrition into the nursery education curriculum and tying it to other subjects. Projects for practical application and experience in a nursery school setting. (Not offered in 1984-85 academic year. See DIA 100 for acceptable nutrition course).

**2 Class Hours, 2 Laboratory Hours**

**\* CDC 170 Practicum I 3 Credits**

Designed to meet the needs of both the experienced and the inexperienced students. The inexperienced student is placed in a classroom setting conducive to the learning of desired teacher competencies, working with an experienced supervising teacher. Six hours per week for twelve weeks in this situation. Self-evaluation as well as being evaluated by others.

The experienced student is given some credit for work experience. For him/her, the practicum emphasizes self-evaluation according to classroom competencies. Both experienced and inexperienced students in group seminars with a college representative and meeting for individual consultation. Required of Child Care majors.

**Prerequisite: 30 hours of counseled coursework**

**Taught evenings, field work days**

**\* CDC 180 Child Health and Safety 3 Credits**

Designed to help students become aware of techniques for promoting general health care and safety standards at children's centers. Red Cross First Aid and Safety course included.

**3 Class Hours**

**\* CDC 190 Infants, Toddlers and the Family 3 Credits**

The mother/father/baby triad and the challenges that parenting brings to the young family are examined. Single parents, parental attachment, adoption, positive self image, infant stimulation, teen pregnancy, community support for families, toddler discipline, delayed pregnancy. Gives prospective parents and teachers of young children insight into this critical period of life.

**3 Class Hours**

**\* CDC 210 Special Problems in Children 3 Credits**

How to understand and help the child with a special problem. Normal adjustment problems, learning disabilities, physical handicaps, retardation and the emotionally disturbed child. Techniques for the classroom teacher and places to get help. Actual student involvement with children who exhibit these problems.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite: PSY 211 Child Development**

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**

**\* CDC 220 Issues and Innovations in Early Childhood Education 3 Credits**

An overview and insight into various philosophies and materials of education for young children, including Montessori, Piaget, open education (comparing English and American schools), affective education, behavior modification. The course aims to develop the competency of the student through practical application.

**3 Class Hours**

**Prerequisite: CDC 100 Introduction to Education of Young Children**

**\* CDC 230 Working with Parents in Nursery Programs 3 Credits**

Designed to introduce the need for the parents' involvement in the education of the young child. Benefits for teachers, parents and children, when teachers and parents work closely together. Consideration of feelings of teachers and parents which help or hinder their working together. Various aspects of working with parents, such as home visiting, group parent meetings, newsletters and written communications, parent conferences and the use of volunteers in the classroom. Part of the course on a workshop basis, and students required to develop a special project to earn their third credit.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite: CDC 100 Introduction to Education of Young Children**

**CDC 240 Social Development of Young Children 3 Credits**

Explores the developmental, environmental and temperamental aspects of the socialization process. Topics include aggression, cooperation and sharing, moral development, peer interaction, sex-role development, communication in the classroom.

**2 Class Hours, 2 Laboratory Hours**

**\* CDC 250 Language in Early Childhood 3 Credits**

A developmental study of language growth in young children and its influence on learning (cognitive abilities, social and behavioral concepts). Contemporary language theories and programs including a diagnostic approach to teaching language (communications skills, reading readiness and literature appreciation) in the pre-school. The student will be expected to spend a number of hours in a special project requiring observation of individual children and language arts programs. (Not offered in 1984-85 academic year).

**3 Class Hours**

**Prerequisite: CDC 100 Introduction to Education of Young Children**

**\* CDC 290 Practicum II 6 Credits**

Designed to be flexible depending upon the needs and interests of the student. Project for experienced students based on the development of these needs and interests. Project must be approved. The experienced student to share ideas from his/her areas of strength in seminar situations.

For the inexperienced student, a classroom situation to conduct a self-evaluation of own competencies as a teacher, as well as being evaluated by others. Work with an experienced supervising teacher. The inexperienced student to spend 9 hours per week in a classroom situation for 12 weeks. Required of Child Care majors.

**Prerequisite: CDC 170 Practicum I**

**Taught evenings, field work days**

**\* CDC 299 Independent Study in Child Care 1-2-3 Credits**

An individual student project in child care beyond the scope or requirements of the courses offered by the department. Under the direction of a faculty member and approved by the program coordinator and department chairman. No more than 3 credits may be acquired toward the Child Care degree in independent study projects.

**1-2-3 Class Hours**

**Prerequisite: 6 Semester hours in Child Care courses**

## CIVIL ENGINEERING TECHNOLOGY

- CIV 110 Introduction to Civil Engineering Technology** ½ Credit  
Introduction to the College and its policies, placement, transfer and study skills. Reasonable skill in the hand-held calculator to be developed. Outside speakers representing the various sectors of employment.  
**1 Class Hour**
- CIV 111 Surveying I** 4 Credits  
Plane surveying including distance measurement, note keeping, leveling, angle measurement, care and use of instruments, stadia, record searching, deed descriptions, traversing, coordinates, area computation, map inking and sewer stakeout.  
**2 Class Hours, 6 Laboratory Hours**  
**Corequisite:** MAT 141 Algebra and Trigonometry
- CIV 112 Surveying II** 2 Credits  
A continuation of CIV 111 Surveying I including mapping, field astronomy, precise leveling, triangulation, electronic measurements and public land surveys.  
**1 Class Hour, 3 Laboratory Hours**  
**Prerequisite:** CIV 111 Surveying I
- CIV 115 Engineering Drawing** 2 Credits  
Fundamentals of Engineering Drawing including care and use of instruments, line-work, lettering, geometric constructions, orthographic projection, sections, auxiliary views, pictorial drawings, and dimensioning.  
Fundamentals of Descriptive Geometry including visibility, true length, true shape, parallelism, perpendicularity, intersections, and developments.  
**1 Class Hour, 3 Laboratory Hours**
- CIV 117 Architectural Drafting** 2 Credits  
Fundamentals of architectural drafting including floor plans, elevations, sections, details, schedules, plot plans, plumbing layouts, electrical layouts. Introduction to solar design. Emphasis on residential drawings.  
**1 Class Hour, 3 Laboratory Hours**  
**Prerequisite:** CIV 115 Engineering Drawing
- CIV 124 Mechanics (Statics)** 3 Credits  
Static force systems and equilibrium. Free body diagrams, trusses, graphic statics, spatial force systems, friction, centroids, moments of inertia.  
**3 Class Hours**  
**Prerequisite:** PHY 141 Physics
- \* CIV 155 Surveying** 3 Credits  
Plane surveying including distance measurement, note keeping, compass surveying, leveling, angle measurement, care and use of instruments, stadia, traversing, coordinates, area computation, mapping and records.  
**2 Class Hours, 3 Laboratory Hours**  
**Prerequisites:** MAT 139 Algebra and MAT 140 Trigonometry or equivalent
- \* CIV 156 Route Surveying** 4 Credits  
Horizontal and vertical curves, spirals, sight distances and earthwork. Introduction to computer applications. Laboratory includes problem sessions using the college's computer to solve coordinate geometric problems.  
**3 Class Hours, 2 Laboratory Hours**  
**Prerequisite:** CIV 155 Surveying
- \* CIV 159 Architectural Drafting I** 3 Credits  
Development of working drawing for use in residential type construction. Plot plans, floor plan, elevations, details, mechanical and electrical layouts. Lectures to include construction materials, specifications and methods.  
**2 Class Hours, 3 Laboratory Hours**

- \* CIV 160 Architectural Drafting II** 3 Credits  
A continuation of CIV 159 Architectural Drafting I. Development of working drawings for two-story and split-level residences.  
**2 Class Hours, 3 Laboratory Hours**  
**Prerequisite:** CIV 159 Architectural Drafting I
- \* CIV 161 Architectural Drafting III** 3 Credits  
Development of a set of working drawings for a small two-story commercial building including floor plans, elevations, sections, details, mechanical and electrical layouts, window and door schedules. Term project. (Not offered in 1984-85 academic year).  
**2 Class Hours, 3 Laboratory Hours**  
**Prerequisite:** CIV 160 Architectural Drafting II
- CIV 212 Route Surveying and Photogrammetry** 4 Credits  
Route Surveying: Simple and compound curves, vertical curves, spirals and earthwork. Selected topics in route selection, field technique and route design. Computer applications (COGO).  
Photogrammetry: Basic optics, geometry of aerial photography, flight planning, ground control, stereoscopy and parallax, stereo pairs, mosaics and plotting instruments.  
**3 Class Hours, 3 Laboratory Hours**  
**Prerequisite:** CIV 111 Surveying I
- CIV 215 Strength of Materials** 4 Credits  
Concepts of stress and strain. Simple stress, strain, torsion, shear and moment, stresses in beams, beam deflections, statically indeterminate beams, composite members, columns, combined stresses.  
**4 Class Hours**  
**Prerequisite:** CIV 124 Mechanics (Statics)
- CIV 217 Materials Testing** 3 Credits  
Composition, properties and testing of construction materials. Major emphasis on plain concrete. Aggregates, cements, admixtures, design and proportioning of concrete mixes, curing and inspection. Bituminous materials and ferrous metals, loan and deformation measurements, behavior of materials under load, strain gauges.  
**2 Class Hours, 3 Laboratory Hours**  
**Corequisite:** CIV 215 Strength of Materials
- CIV 224 Reinforced Concrete Design** 3 Credits  
Fundamental theory and principles for the design of reinforced concrete. Design, analysis and detailing of rectangular beams. T-beams, beams reinforced for compression, columns and footing. Emphasis on ultimate strength design methods. Theory of prestressed concrete. An integrated design and detailing project.  
**2 Class Hours, 3 Laboratory Hours**  
**Prerequisite:** CIV 215 Strength of Materials
- CIV 226 Structural Steel Design** 3 Credits  
Fundamental theory and principles necessary for design of simple steel structures. Design, investigation and detailing of beams, columns, tension and compression members and their connections. Composite beams. An integrated design and detailing project.  
**2 Class Hours, 3 Laboratory Hours**  
**Prerequisite:** CIV 215 Strength of Materials
- \* CIV 228 Estimating and Construction Planning** 3 Credits  
A systematic approach to estimating building project costs combined with a study of construction management and the critical path method of scheduling.  
**2 Class Hours, 2 Laboratory Hours**

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**



**CIV 231 Estimating and Construction Planning 3 Credits**

A systematic approach to estimating building project costs combined with a study of the critical path method of scheduling.

**2 Class Hours, 3 Laboratory Hours**

**Prerequisite:** CIV 117 Architectural Drafting

**CIV 235 Hydraulics 4 Credits**

Hydraulics including properties of fluids, hydrostatics, fluid motion in or through orifices, nozzles, pipes, weirs, open channels, hydraulic machinery, pipe branches and networks.

**3 Class Hours, 3 Laboratory Hours**

**Prerequisite:** CIV 124 Mechanics (Statics)

**CIV 236 Construction Management 3 Credits**

Principles of construction management, specification writing, with emphasis on planning, building, scheduling and controlling a project.

**3 Class Hours**

**CIV 238 Architectural Design and Building Materials 3 Credits**

Design and detailing of commercial buildings including site considerations, space requirements, layout planning, building materials, construction methods, construction details, working drawings. Emphasis on individual creativity. Fundamental theory and principles necessary for the design of simple timber structures. Semester project.

**2 Class Hours, 3 Laboratory Hours**

**Prerequisite:** CIV 117 Architectural Drafting

**CIV 240 Soil Mechanics 3 Credits**

Soil origin and nature, soil density, test borings, gradation compaction, soil water, frost in soil, classification, stress, shear strength, bearing capacity, piles. The laboratory covers ASTM and AASHTO specifications used in classifying and predicting behavior of soils.

**2 Class Hours, 3 Laboratory Hours**

**Prerequisite:** CIV 215 Strength of Materials

**\* CIV 268 Engineering Economics 2 Credits**

Use of compound interest in financing and in determining engineering cost comparisons. Introduction to depreciation methods. Illustrative cases and problems (personal and engineering) including New York State Professional Engineering Examination problems.

**2 Class Hours**

**Prerequisite:** MAT 139 Algebra or equivalent

**CIV 299 Independent Study 2-4 Credits**

The student undertakes an independent project in his/her specialty under the guidance of a faculty member. Only one independent course allowed per semester. Consideration may be given to a project involving a work assignment.

**Prerequisite:** Departmental approval

**COMMUNICATIONS****COM 110 Introduction to Photography 3 Credits**

Basics of camera design and operation, plus the fundamentals of photographic visualization and composition: line, form, color, light, shadow. Darkroom procedures, film processing, basic printmaking, selective printing techniques. (Students must have their own 35mm single lens reflex camera and should expect to pay for their own photographic materials — about \$60.)

**2 Class Hours, 2 Laboratory Hours**

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**

**COM 120 Introduction to Audio and Video Production 3 Credits**

Theory and practice. Emphasis on actual experience with a variety of equipment: microphones, reel to reel and audio cassette tape recorders, black and white and color videotape players and recorders, portable videotape equipment.

**3 Class Hours**

**COM 130 Media and Society 3 Credits**

The emergence and the contemporary effects of the social institution of mass communication upon our total lives—familial, economic, political, educational, religious and recreational. Consideration of the major print and electronic media and their particular roles and influences in our lives. News reporting as a profession and as a business. Impact of advertising upon the media and the media's impact on advertising. The interrelationships of mass communications and popular culture. (Formerly SOS 115 Media and Society.)

**3 Class Hours**

**COM 200 Film, Photography, Television: An Introduction to Image Making 3 Credits**

Critical examination of photography, film, television. Processes used in the production of media, as well as important media works.

**3 Class Hours**

**COM 203 Filmmaking 3 Credits**

Introduction to the craft of filmmaking. A "hands-on" approach to basic principles of photography, camera operation, lighting, editing used in the making of motion pictures. Introduction to sound recording.

**2 Class Hours, 2 Laboratory Hours**

**CAD/CAM  
(Computer Aided Design/Computer Aided Manufacturing)****CAD 200 Introduction to Computer Graphics 3 Credits**

Introduction to the College's Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) System. Command structure. Implementation of commands to generate basic two-dimensional drawings. Introduction to three-dimensional construction. Text and execute files. Selected topics.

**2 Class Hours, 4 Laboratory Hours**

**Prerequisites:** MAT 141 Algebra & Trigonometry or equivalent/and an acceptable background in engineering drawing.

**CAD 201 Advanced Computer Aided Graphics 3 Credits**

Mechanical Design in three-dimensions. View and model space commands. Work in isometric and auxiliary views. Descriptive geometry problem solving. Surfaces. Presentation of 3D parts and assemblies on a drawing format. Execute programs, file manipulation, MACRO language.

**2 Class Hours, 4 Laboratory Hours**

**Prerequisite:** CAD 200 Introduction to Computer Graphics

**CAM 210 Computer Aided Numerical Control I 3 Credits**

Numerical control programming and applications using computer graphics. Tool paths are developed, verified, edited and regenerated from part drawings: point to point, contouring, pocket and profile milling and lathe applications. Sheet metal flat pattern development and punching. Inputs are in "APT" Automatic Programmed Tool. Post processing. 2½ axis machining.

**2 Class Hours, 4 Laboratory Hours**

**Prerequisites:** CAD 200 Introduction to Computer Graphics. Background in Numerical Control. Permission of instructor.

### **CAD 220 Printed Circuits, Electrical Schematics and Wiring Diagrams**

**3 Credits**

Fundamentals of computer aided design as used in the field of electricity and electronics. Laboratory work includes layout of schematic and ladder diagrams using previously constructed library parts. Design of printed circuit boards using automatic board routing. Use of extract definition files to obtain a bill of materials.

**2 Class Hours, 4 Laboratory Hours**

**Prerequisites:** Permission of instructor and CAD 200 Introduction to Computer Graphics, EET 150 Electronics or equivalent industrial experience.

### **CAD 230 CAD System Operation**

**3 Credits**

System architecture—physical components. Hands-on experience. Building a system, day-to-day operating procedures, system failures and recovery procedures. DISC file management, magnetic tape back-ups. CADDs entry options, fonts, MENUS, KEYFILES, BATCH processor, task interrupts, command editor. System commands relating to file manipulation, information textfiles, system status, accounting log and textfile manipulation utilities. MACRO languages.

**2 Class hours, 4 Laboratory Hours**

**Prerequisite:** CAD 201 Advanced Computer Aided Graphics and permission of instructor.

## **COMPUTER STUDIES COURSES**

*The CST courses are designed to acquaint students with the computer and its capabilities and to provide opportunities for "hands-on" experience.*

*Because many college programs and industries depend on the computer to process data rapidly, both transfer-minded students and those preparing for immediate employment after graduation are introduced to the capabilities of the computer.*

*The College has a large computer system with more than 100 time-sharing terminals capable of supporting both the College's administrative and academic computing concurrently. Microcomputers and microprocessors provide additional laboratory experiences.*

### **CST 100 BASIC**

**1 Credit**

Arithmetic expressions, conditional transfers, conversational programming, loops, subscripted variables, functions and subroutines. Conforms to American National Standard for Minimal BASIC. May not be taken for credit if student takes CST 110 Introduction to Data Processing.

**(Half semester)**

**1 Class Hour, 2 Laboratory Hours**

### **CST 101 Orientation**

**0 Credits**

An opportunity for students to receive information about advisement and registration, transfer, interview techniques, resume writing, career opportunities, new trends in computing. Listening to speakers from Broome Community College, from other colleges, and from business and industry, viewing films and video tapes and watching demonstrations. May be used as a common testing hour for multi-section courses. All fulltime Computer Studies students are required to register for this course every semester.

### **CST 105 Understanding Computers**

**3 Credits**

How computers work. Step-by-step problem solving. Historical perspective and future trends. Social implications. The value of information to society. Applications. Laboratory work which includes simple programming and the use of programs for information processing, is done on the IBM Personal Computer. For students with no previous computing experience.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** ENG 110 Written Expression I

### **CST 110 Introduction to Data Processing**

**3 Credits**

Historical development and current influences exerted on society by the computer. Basic computer concepts including data entry, hardware and software components that comprise a computer system. Introduction to the computer programming language BASIC with hands-on experience. Emphasis on logical problem definition and documentation.

**3 Class Hours**

### **CST 113 Pascal with Structured Programming**

**5 Credits**

Introduction to problem solving by computer using the structured programming language, Pascal. Top down design emphasized. Programming steps include program definition, outline of solution, structure charts, coding, debugging, testing and validation, documentation and program maintenance. Topics include loop structures, procedures, functions, scalar and ordinal types, arrays, records, text files. Documentation includes a logic manual and user's guide. Additional topics are number base conversion, binary arithmetic. Laboratory assignments reflect the basic structures of Pascal. For Computer Studies students.

**4 Class Hours, 2 Laboratory Hours**

**Prerequisite:** MAT 139 Algebra or equivalent

### **CST 115 Problem Solving with Pascal**

**3 Credits**

Introduction to problem solving by computer using the structured programming language Pascal. Programming steps include problem definition, outline of solution, selection of algorithms, coding, debugging, testing and validating, documenting, program maintenance. Pascal syntax includes scalar, structured data types, assignment statements and arithmetic expressions, control statements, input and output statements, functions and procedures. Examples will introduce the basic algorithms used in computer science. (May not be taken for credit by Computer Studies students).

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** MAT 003B Basic Math Review or equivalent and CST 110 Introduction to Data Processing

### **CST 116 RPG II**

**3 Credits**

Fundamentals of RPG (Report Program Generator) programming language. Beginning language for small business installations, especially those converting manual or unit record systems to computer. Explanation of specification sheets, internal logic, branching and table look-up operations.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** One CST (computer studies) course

### **CST 118 Computer Programming—COBOL**

**3 Credits**

Fundamentals of ANSI COBOL applied to solutions of commercially oriented problems. A number of problems assigned for execution on the computer.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** One CST (computer studies) course

### **CST 120 Computer Programming—FORTRAN**

**3 Credits**

Programming solutions to business problems utilizing the FORTRAN IV language. Emphasis on documentation procedures, techniques of programming and error analysis, simulation of business data processing in a laboratory environment. For business and data processing students.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** One CST (computer studies) course

### **CST 122 Scientific Computer Programming —FORTRAN**

**3Credits**

Introduction to problem solving techniques using FORTRAN including development of an algorithm, flow charting, program writing, debugging, storage and execution, input and output, loop techniques, array manipulation, file control and control of on-line equipment, structured programming, terminal and batch operations. Material to be covered taken from student's area of study. For engineering technology students.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** Working knowledge of algebra and trigonometry



### **CST 124 Computer Programming for Engineering and Computer Science 3 Credits**

FORTRAN programming with applications in engineering, statistics and mathematics. Topics include syntax, looping, data representation, branching, functions and subroutines, multidimensional arrays. Simulation of engineering processes and graphical displays using CAD/CAM system.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** MAT 140 Trigonometry and EGR 150 Engineering Graphics or CST 113 Pascal with Structured Programming

### **CST 126 Assembly Programming—BAL 3 Credits**

System/360 and 370 overview, binary and hexadecimal arithmetic, relative addressing, machine and assembly code, instruction formats, type formats and boundaries, input/output techniques and data sets, decimal operations, logical instructions, branching and looping, subroutines, fixed point operations.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** CST 113 Pascal with Structured Programming

### **CST 140 Computer for Chemists 3 Credits**

Introduction to the application of both large time-shared computers and microcomputers to problems in chemistry. Principles of structured programming using FORTRAN including algorithm development, flow charting, debugging and execution. Microcomputer high level languages, operating systems and hardware, and introduction to its use in the control of laboratory equipment, and in collection, storage and processing of laboratory data. For Chemical Engineering Technology students.

**2 Class Hours, 2 Laboratory Hours**

**Corequisites:** MAT 142 Applied Calculus 1 or MAT 163 Calculus with Analytic Geometry 1 or MAT 171 Engineering Calculus with Analytic Geometry 1 and CHM 146 Chemistry or CHM 162 Chemistry.

### **CST 141 FORTRAN Programming with Graphic Applications 3 Credits**

Introduction to problem solving techniques using FORTRAN. Development of steps to solve a problem (algorithm), use of a text editor, terminal operation, file storage and retrieval, program writing, debugging, execution and program documentation. Components include input/output, formatting, loop techniques, array manipulation, use of complex numbers, subroutines, sequential access data files. Graphic applications include figure creation, scaling, plots of X-Y data, equations and polar plots. For Electrical Engineering Technology students.

**3 Class Hours, 2 Laboratory Hours**

**Corequisite:** MAT 141 Algebra and Trigonometry

### **CST 150 APL 3 Credits**

An introduction to the powerful array handling computer language APL. Operations on scalars, vectors, matrices, arrays of any size or shape. primitive and user defined functions. Editing and workspace management. Business and scientific applications.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** Two 3-credit hour programming language courses and MAT 139 Algebra or equivalent

### **CST 170 Digital Logic 3 Credits**

Comprehensive coverage of basic logic gates. Boolean Algebra, Karnaugh Mapping and Quine-McCluskey technique with a view toward circuit simplification. Adders, subtractors, multiplexers, code converters, shift registers, asynchronous and synchronous counters presented in detail as basic computer building blocks. Interfacing between analog-digital and digital-analog covered as the method of communicating with the computer. Laboratory exercises utilize TTL and CMOS logic chips to reinforce material presented in lectures.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** CST 113 Pascal with Structured Programming

### **CST 200 Systems Analysis I 3 Credits**

A first course dealing with the principles of systems analysis and problem solving, concentrating on the investigation and analysis of systems and their resulting design. The importance of standards, procedures, documentation and design tools. A team case study used to develop a design for a new system.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisites:** Two programming languages (COBOL preferred) or instructor's permission

### **CST 201 Systems Analysis II 3 Credits**

Continuation of the principles of systems analysis with a concentration on systems development, implementation and evaluation. A team case study approach used to develop a system based on a previously completed analysis and design. Programs written using COBOL and structured programming techniques.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisites:** CST 118 Computer Programming—COBOL, CST 218 Advanced COBOL, and CST 200 Systems Analysis I

### **CST 202 Advanced Pascal with Data Structures 3 Credits**

Static and dynamic data structures. Choice of proper structure to organize data. Arrays, records, files, linked lists, trees, stacks, queues and directed graphs with applications. Programming will be done in Pascal.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisites:** CST 113 Pascal with Structured Programming

### **CST 205 Advanced FORTRAN 3 Credits**

A study of advanced techniques using FORTRAN. Emphasis on structured programming techniques. Data structures include stacks, queues and trees. Several sorting algorithms are developed and compared. Use of the flecs dialect as well as FORTRAN 77. Advanced numerical techniques.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** CST 122 Scientific Computer Programming—FORTRAN or CST 124 Computer Programming for Engineering and Computer Science

### **CST 211 Small Systems Applications 3 Credits**

Use of a disk operating system, sequential and random access files in BASIC, word processing, spread sheet analysis, data management, business graphics. Laboratory work on the IBM Personal Computer.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** CST 113 Pascal with Structured Programming

### **CST 218 Advanced COBOL 3 Credits**

A second course in the use of the COBOL language as a means of implementing computerized solutions to data processing problems. Batch and interactive processing, various file access techniques, use of advanced language statements and of various utilities available to the COBOL programmer.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** CST 118 COBOL with C grade or better

### **CST 220 Introduction to Microprocessors 3 Credits**

Introduction and programming the 8088 microprocessor with the aid of a macro assembler. Microprocessor definitions and terms, branching, flags, indexed and extended addressing, stack operations, subroutines and system interrupts. Extensive use of the 8088 in programming and interfacing.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisites:** CST 170 Digital Logic and one programming language

**CST 222 Topics in Computer Systems****3 Credits**

Topics in this course acquaint students with current programming techniques and equipment. They may include microprocessor programming and interfacing; scheduling, queueing, time-sharing, file manipulations; microcomputer programming and graphics; data communications systems.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** CST 113 Pascal with Structured Programming or CST 124 Computer Programming for Engineering and Computer Science

**CST 225 Introduction to Small Systems****3 Credits**

Introduction to the concepts and implementation of small computer systems. Hardware and software techniques, keyboards, display terminals, printers, graphics, magnetic storage, disk drives, disk operating systems, telecommunication techniques, and networking. Extensive use of the IBM PC in the laboratory will reinforce classroom concepts.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisites:** CST 220 Introduction to Microprocessors and CST 113 Pascal with Structured Programming

**CST 297 Cooperative Work Experience****1-3 Credits**

Cooperative education in computing may be available to full-time students. On-the-job experience may be obtained by working with businesses, industries and offices whose operations require the use of computers. To be eligible a student must maintain a cumulative grade point average of 2.5, with a 3.0 average in CST courses, and have no F grades.

**CST 299 Independent Study****1-3 Credits**

The student undertakes an independent project, under the guidance of a faculty member, which is beyond the scope of courses currently offered by the department. Only one independent study project allowed per semester.

**CRIMINAL JUSTICE**

**Criminal Justice (CRJ) courses may not be used to satisfy the Social Science requirement.**

*The Criminal Justice program was developed with great flexibility in course selection and can be taken on a part-time basis by those individuals currently employed in the field. Those students who wish to pursue it on a full-time basis should contact the Program Coordinator of Criminal Justice. Very close planning and advisement will be necessary to pursue this program to its completion in two years.*

**CRJ 101 Introduction to Criminal Justice****3 Credits**

Overview of the major components of the criminal justice system—law enforcement, prosecution, trial courts and corrections. A systems approach is utilized with an emphasis on the structure, functions and interdependence of these and other criminal justice system components. (Formerly CRJ 100)

**3 Class Hours**

**CRJ 115 Juvenile Justice System****3 Credits**

Overview of the juvenile justice system, including the history, process, status and philosophy of the juvenile court. Law enforcement handling of juveniles, various theories of delinquency causation, correctional programs and alternative methods of dealing with juvenile offenders. (Formerly CRJ 250).

**3 Class Hours**

**THE FOLLOWING CRIMINAL JUSTICE COURSES  
ARE TAUGHT IN THE EVENING ONLY**

**\*CRJ 105 Introduction to Corrections****3 Credits**

Overview of the corrections components of the criminal justice system, tracing the history of corrections in the United States. Relationships and interdependencies of corrections with the court and law enforcement components of the criminal justice system and a discussion of the theoretical basis for the four major types of correctional models. (Formerly CRJ 240).

**3 Class Hours**

**\*CRJ 125 Penal Law****3 Credits**

Essential elements of the various crimes under the New York State Penal Law. The concepts of culpability and criminal defenses recognized under the New York State Penal Law as they relate to murder, rape, robbery, burglary, arson, assault, drug offenses, disorderly conduct and harassment. (Formerly CRJ 210).

**3 Class Hours**

**\*CRJ 130 Introduction to Security****3 Credits**

Organization and management of the security function in industry, business, government and institutions. The protection of personnel, facilities and other assets, as well as administrative, legal and technical problems of loss prevention and control. (Formerly CRJ 260).

**3 Class Hours**

**\*CRJ 212 Criminal Procedure and  
Constitutional Law**

**3 Credits**

The right to counsel, search and seizure, confessions, lineups, electronic surveillance, probation and parole. (Formerly CRJ 120).

**3 Class Hours**

**Prerequisite:** CRJ 101 Introduction to Criminal Justice

**\*CRJ 215 Police Administration****3 Credits**

Fundamentals of organization, supervision and over-all management of police and civilian personnel. Designed to supply a background for the student in dealing with the complexities involved in the management aspect of various police agencies. (Formerly CRJ 110).

**3 Class Hours**

**Prerequisite:** CRJ 101 Introduction to Criminal Justice

**\*CRJ 220 Evidence for Law Enforcement****3 Credits**

A practical examination of the law of evidence, as it pertains to the function of persons engaged in law enforcement. Fundamental concepts and terminology, due process of obtaining evidence in criminal investigations, search and seizure, confessions, identification to the process of presenting evidence at hearings and trials of criminal cases (scientific evidence, direct and cross examination of witnesses).

**3 Class Hours**

**Prerequisites:** CRJ 101 Introduction to Criminal Justice and CRJ 125 Penal Law.

**CRJ 225 Security Administration****3 Credits**

Administration of public and private security efforts; problems in protection program development and evaluation, functions of various levels of personnel, company/organizational relations, documents and personnel access control, detection systems, devices, and equipment, emergency and disaster planning, new directions in the field of security.

**3 Class Hours**

**Prerequisite:** CRJ 130 Introduction to Security or permission of the instructor/department chairperson

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**



**\*CRJ 230 Criminal Investigation 3 Credits**  
 Basic principles of investigation as they relate to the collection, preservation, identification and examination of physical evidence. Techniques for locating and interviewing witnesses and for interrogating suspects. Common myths associated with detective work.  
**3 Class Hours**  
**Prerequisites:** CRJ 101 Introduction to Criminal Justice and CRJ 125 Penal Law

**\*CRJ 235 Understanding and Changing Criminal Behavior 3 Credits**  
 In-depth examination of the various theories utilized in explaining and dealing with criminal behavior. Theories emanating from the fields of psychology, sociology and biology provide the basis of this examination. A seminar approach. Participation of students will be expected to document and report their activities.  
**3 Class Hours**  
**Prerequisites:** CRJ 101 Introduction to Criminal Justice and CRJ 105 Introduction to Corrections.

**\*CRJ 255 Special Topics in Criminal Justice 1-3 Credits**  
 The specific area to be covered will be based upon identified needs and interests of criminal justice students. This course also provides a forum for professional individuals in the criminal justice field with a particular expertise to share their knowledge and skills with students.  
**1-3 Class Hours**  
**Prerequisites:** CRJ 101 Introduction to Criminal Justice and 2 other CRJ courses.

**CRJ 299 Independent Study 1-3 Credits**  
 An individual student project concerned with advanced level work beyond the scope or breadth of regular courses. A specific area or topic is investigated under the direction of a faculty member. Must be approved by department chairperson.  
**Prerequisite:** CRJ 101 Introduction to Criminal Justice and 6 credits in CRJ courses.

## DENTAL HYGIENE

**DEN 101 Dental Hygiene I 2 Credits**  
 Contemporary practice of dental hygiene and factors affecting such practice. Fundamentals of instrumentation, exploring, probing, scaling, and polishing on student patients. Clinical experience in the basic techniques of preparation for the dental hygiene appointment, patient evaluation and data collection and patient treatment.  
**2 Class Hours**  
**Corequisite:** DEN 101L Dental Hygiene I Laboratory

**DEN 101L Dental Hygiene I Laboratory 2 Credits**  
 Practical application in an actual clinical setting of the principles described in the lecture mode of this course.  
**6 Laboratory Hours**  
**Corequisite:** DEN 101 Dental Hygiene I

**DEN 102 Dental Hygiene II 4 Credits**  
 Continuation of DEN 101 Dental Hygiene I. Clinical experience in the basic techniques of dental hygiene care including treatment planning, patient appraisal and instrumentation. Theory in ethics, jurisprudence, professional organizations, emergency medical and dental procedures and care of patients with special medical problems and oral physiotherapy and oral health instruction.  
**4 Class Hours**  
**Prerequisites:** DEN 101 Dental Hygiene I, BIO 131 Human Biology I and DEN 103 Oral Anatomy and Physiology  
**Corequisite:** DEN 102L Dental Hygiene II Clinic

**DEN 102L Dental Hygiene II Clinic 2 Credits**  
 Clinical dental hygiene practice.  
**8 Laboratory Hours**  
**Corequisite:** DEN 102 Dental Hygiene II

**DEN 103 Oral Anatomy and Physiology 4 Credits**  
 Normal structure and function of the oral cavity (microscopic and gross). Laboratory work provides experience with traditional approaches to the study of oral anatomy and physiology.  
**2 Class Hours, 4 Laboratory Hours**

**DEN 106 Clinical Dental Radiography 1 Credit**  
 Nature and generation of radiation, understanding of radiation hygiene and safety, basic concepts of the X-ray machine. Intraoral dental radiographic techniques, film processing and mounting, interpretation of radiographic factors and recognition of anatomical landmarks.  
**1 Class Hour**  
**Prerequisites:** DEN 101 Dental Hygiene I and DEN 103 Oral Anatomy and Physiology and BIO 131 Human Biology I.  
**Corequisite:** DEN 106L Clinical Dental Radiography Laboratory

**DEN 106L Clinical Dental Radiography Laboratory 1 Credit**  
 Practical application on manikins and patients of principles described in lecture mode.  
**2 Laboratory Hours**  
**Corequisite:** DEN 106 Clinical Dental Radiography

**DEN 201 Dental Hygiene III 2 Credits**  
 Continuation of DEN 102 Dental Hygiene II. Integration of theory with clinical experience in various oral hygiene preventive procedures and essential business aspects of a dental office. Emphasis on planning and execution of the total treatment plan concept.  
**2 Class Hours**  
**Prerequisites:** DEN 102 Dental Hygiene II, DEN 106 Clinical Dental Radiography and BIO 160 Microbiology  
**Corequisite:** DEN 201L Dental Hygiene III Clinic

**DEN 201L Dental Hygiene III Clinic 3 Credits**  
 Clinical dental hygiene practice.  
**12 Laboratory Hours**  
**Corequisite:** DEN 201 Dental Hygiene III

**DEN 202 Dental Hygiene IV 2 Credits**  
 Continuation of DEN 201 Dental Hygiene III. Clinical experience in all phases of dental hygiene care including selected expanded functions.  
**2 Class Hours**  
**Prerequisites:** DEN 201 Dental Hygiene III, DEN 204 General and Oral Pathology and DEN 205 Periodontology  
**Corequisite:** DEN 202L Dental Hygiene IV Clinic

**DEN 202L Dental Hygiene IV Clinic 3 Credits**  
 Clinical dental hygiene practice.  
**12 Laboratory Hours**  
**Corequisite:** DEN 202 Dental Hygiene IV

**DEN 204 General and Oral Pathology 3 Credits**  
 Broad picture of the disease process through the study of common general diseases, their cause, results and treatment. Emphasis on the principles of inflammation, healing and repair, oral disease, their causes, recognition and treatment.  
**3 Class Hours**  
**Prerequisites:** DEN 102 Dental Hygiene II, BIO 132 Human Biology II and BIO 160 Microbiology

**DEN 205 Periodontology****2 Credits**

Overall study of the pathology of the supporting structures surrounding the teeth. Special emphasis on recognition and treatment of the periodontal patient within the scope of the dental hygienist.

**2 Class Hours**

**Prerequisites:** DEN 102 Dental Hygiene II, Den 106 Clinical Dental Radiography, BIO 132 Human Biology II and BIO 160 Microbiology

**DEN 206 Dental Pharmacology****2 Credits**

Pharmacology as it affects the clinical practice of dental hygiene and dentistry. Drugs commonly used in dentistry and correct methods for their use. Emphasis on pharmacological aspects of anesthesia.

**2 Class Hours**

**Prerequisites:** BIO 132 Human Biology II and BIO 160 Microbiology

**DEN 209 Nutrition****3 Credits**

Basic nutrition principles, including functions, sources, conditions resulting from excessive or inadequate intake of each nutrient. Study of diet planning, dietary guideline, weight control, nutrition care throughout life cycle. Special emphasis on the relation of nutrition to the oral cavity and its practice in the dental office. Interviewing, oral health diet score, nutritional counseling.

**3 Credit hours**

**Prerequisite:** DEN 102 Dental Hygiene II

**DEN 210 Dental Materials****3 Credits**

Composition, chemical and physical properties and use of materials used in the dental laboratory and operator. Laboratory sessions will provide experience in performing common dental laboratory procedures and background for clinical application of expanded functions.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** DEN 201 Dental Hygiene III

**DEN 213 Public Health****3 Credits**

Principles of public health and fundamentals of assessing, planning, implementing and evaluating of public health care with emphasis on community dental health. Laboratory experience in assessing, planning, implementing and evaluating care for a particular target population.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** DEN 102 Dental Hygiene II

**DEN 214 Dental Specialties****2 Credits**

Overview of dental specialties with emphasis on those specialties not covered in other courses in the Dental Hygiene curriculum—endodontics, orthodontics, pedodontics.

**2 Class Hours**

**Prerequisite:** DEN 201 Dental Hygiene III

**DEN 298 Independent Study - Fall****1-3 Credits**

Advanced studies in Dental Hygiene conducted under the guidance of a Dental Hygiene instructor.

**Prerequisite:** DEN 101, 102 Dental Hygiene I and II and permission of Department Chairperson

**DEN 299 Independent Study - Spring****1-3 Credits**

Advanced studies in Dental Hygiene conducted under the guidance of a Dental Hygiene instructor.

**Prerequisite:** DEN 101, 102 Dental Hygiene I and II and permission of Department Chairperson

**DIETETIC ASSISTANT****\* DIA 100 Introduction to Principles of Basic Nutrition****3 Credits**

Designed to develop an awareness and appreciation of the importance and scope of the science of nutrition. Factors contributing to individual differences in food and eating patterns, nutritional needs at various stages of life, functions and sources of major nutrients, sociological impacts of nutrition. May be used as Child Care elective in AAS program.

**3 Class Hours**

*These courses are designed for individuals already employed in the food service field, as there is a requirement for supervised work experience by a Registered Dietician. All persons entering the program are responsible for finding a preceptor, and registrations are on a pre-application basis.*

**\* DIA 101 Nutrition****3 Credits**

The social, cultural, psychological and physiological functions of food. Nutrition care throughout the life cycle. Special consideration given to modifications of the basic diet to meet the needs of the resident in health care facilities. Techniques of interviewing and medical ethics.

**2 Class Hours, 4 Directed Practice****\* DIA 102 Institutional Food Preparation****3 Credits**

Principles of food preparation, standardization of recipes, menu structure and planning. Serving, merchandising and promotion of food items. Various food preparation equipment and techniques. Sanitary food handling and holding practices emphasized.

**2 Class Hours, 4 Directed Practice****\* DIA 201 Food Management Systems****3 Credits**

An introduction to the health field and its inter-relationships. The concept of management including the principles of organizing, evaluating, and the decision making process. Control through specification, purchasing, inventory and cost analysis. Equipment, housekeeping, sanitation and safety practices.

**2 Class Hours, 4 Directed Practice****\* DIA 202 Personnel Management****3 Credits**

Leadership and supervisory techniques. Implications of authority and responsibilities. Understanding and communicating with workers and co-workers. Employee recruitment, training and evaluation. Morale and labor relations. Analysis of duties and work simplification performance and motivation.

**2 Class Hours, 4 Directed Practice****ECONOMICS****ECO 101 Consumer Economics****3 Credits**

Institutions and forces directly affecting the consumer: consumer income and expenditure patterns, personal finance, credit and tax problems, personal investment alternatives. Impact of the consumer movement on the individual and society.

**3 Class Hours****ECO 104 Labor Economics and American Industry****3 Credits**

Interaction among business, labor and government. Analysis of the causes of unemployment and income inequality. Connection between productivity, wages, prices and employment and application of anti-trust and labor laws to firms and unions.

**3 Class Hours****\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**



**ECO 110 Introduction to Micro-Economics 3 Credits**

Supply, demand and the market system as they relate to contemporary economic problems including poverty, energy, the environment and urban decay. The allocation of resources under conditions of competition and various degrees of monopoly. Rationale behind anti-trust laws and other governmental attempts to control monopoly power and promote economic well-being. Comparative economic systems.

**3 Class Hours**

**ECO 111 Introduction to Macro-Economics 3 Credits**

Causes of unemployment and inflation and the government's efforts to control them. Problems of economic growth as they relate to our economy and the other countries, developed and underdeveloped. International trade and finance problems.

**3 Class Hours**

**ECO 140 Economics of Urban Problems 3 Credits**

Application of economic analysis to urban problems, an understanding of the economic forces that affect housing, transportation, poverty, crime, land use, the financing of urban services and the urban future.

**3 Class Hours**

**ECO 253 Money and Banking 3 Credits**

An examination of money, credit and financial institutions, emphasizing how the monetary system influences economic activity. Nature and functions of money, the commercial banking system and other financial institutions, the roles of the Federal Reserve System and the Treasury, monetary policy and international money problems.

**3 Class Hours**

**Prerequisite:** ECO 111 Introduction to Macro-Economics

**ECO 299 Independent Study 1-3 Credits**

An individual student project in economics which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.

**Prerequisite:** 3 semester hours in economics

**ELECTRICAL ENGINEERING TECHNOLOGY****EET 110 Introduction to Electrical Engineering Technology ½ Credit**

Introduction to Electrical Engineering Technology, career opportunities, transfer opportunities, study skills and college services. An association with industry is established through field trips and panel discussions involving industry representatives. Reasonable proficiency in the use of the hand held calculator is developed.

**1 Class Hour**

**‡ EET 111 Electrical Construction Laboratory I 2 Credits**

Basic knowledge about today's electrical equipment. Experience in the installation, fabrication and maintenance of electrical equipment by means of "hands-on" approach. Shop safety and the National Electrical Code. Basic residential and commercial wiring procedures, basic measuring techniques, fundamentals of basic machine operations.

**1 Class Hour, 3 Laboratory Hours**

**EET 112 Electrical Construction Laboratory II 1 Credit**

Advanced wiring methods, fractional horsepower motor and appliance troubleshooting, introduction to residential and commercial lighting and power layout-design.

**3 Laboratory Hours**

**Prerequisite:** EET 111 Electrical Construction Laboratory I

**† EET 121 Electrical Circuits & Laboratory 4, 1 Credits**

Fundamentals of electrical circuits and application of circuit laws, theorems and measuring techniques to both d-c and a-c single and polyphase circuits.

**4 Class Hours, 3 Laboratory Hours**

**\*‡ EET 125 Circuits I 3 Credits**

D-c circuits, including loop and nodal analysis, superposition, Thevenin's and Norton's theorems, RL and RC time constants.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** MAT 139 Algebra or equivalent

**Student may take MAT 139 concurrently with this course**

**\*‡ EET 126 Circuits II 3 Credits**

A continuation of the study of circuits concepts related to single and three-phase alternating current. Resonance, network analysis, power.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisites:** MAT 140 Trigonometry or equivalent and EET 125 Circuits I

**Student may take MAT 140 concurrently with this course**

**EET 130 Engineering Drawing 1 Credit**

Principles of projection. Development of drafting skills, lettering and proper line construction. Dimensioning and tolerancing, with an emphasis on shop processes. Use of auxiliary views and sectioning. Preparation of assembly drawings, materials lists, schematic and wiring diagrams.

**3 Laboratory Hours**

**† EET 150 Electronic Devices & Laboratory 4, 1 Credits**

A first course in Electronics introducing the devices fundamental to the field. Introduction of semiconductor diodes, bipolar and field effect transistors, thyristors, operational amplifiers, microprocessors. Design and analyze representative circuits based on these building blocks. Competency in FORTRAN IV computer language is required and is applied to generate software for design and analysis of related circuits.

**4 Class Hours, 3 Laboratory Hours**

**Prerequisites:** MAT 141 Algebra and Trigonometry and CST 141 FORTRAN Programming with Graphic Applications and EET 121 Electrical Circuits

**EET 162 Computer Aided Network Analysis 3 Credits**

Computer analysis of complex electrical and electronic networks by application of network theorems and application of software as needed. Use of a second computer language to display the response of two port networks. Use of the computer to apply matrix methods to the analysis of complex circuits and the solution of network problems.

**3 Class Hours**

**Prerequisites:** CST 141 FORTRAN Programming with Graphic Applications and EET 121 Electrical Circuits and MAT 141 Algebra and Trigonometry

**‡ EET 181 Installation and Maintenance of Electrical Motors 2 Credits**

Theory, operation and application of electrical machines and control systems as related to industry. Installation, maintenance and trouble-shooting of electrical motors and control systems emphasized.

**1 Class Hour, 2 Laboratory Hours**

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**

**† These courses carry separate grades for lecture and laboratory**

**‡ Combined lecture-laboratory courses; final grade depends on successful completion of both parts**

† **EET 183 Applied Electricity** **3 Credits**

Practical applications of electrical concepts as applied to basic circuits, motors and transducers. Laboratory work includes demonstration of basic electrical concepts using measuring instruments such as digital multimeters, oscilloscopes, function generators, counters, wattmeters, bridges and transducers as sensors.

**2 Class Hours, 3 Laboratory Hours**

**Prerequisites:** PHY 142 Physics and MAT 141 Algebra and Trigonometry

† **EET 186 Electronics** **3 Credits**

Practical applications of electronic concepts as applied to solid state devices, amplifiers, power supplies, oscillators, timers, multivibrators and basic logic devices and transducers. Laboratory work includes practical applications of concepts by students, operation of common electronic instruments such as oscilloscope, curve tracer, function generator and counter.

**2 Class Hours, 3 Laboratory Hours**

**Prerequisite:** EET 183 Applied Electricity

**EET 230 Electronic Design and Fabrication** **1 Credit**

Selection, package design and construction of an electronic project and preparation of related drawings. Use of various manufacturing processes to fabricate the project. Use of industrial standard drafting practices to properly describe the operations. Chassis layout, printed circuit board design, exposure, and etching, wiring, soldering, and enclosure fabrication are required.

**3 Laboratory Hours**

\*† **EET 235 Electrical and Electronics Drawing** **2 Credits**

Graphic representation of circuitry related to the electrical and electronics fields. Use of industrial standards and symbolism to draw electronic, schematic and wiring diagrams, printed circuit layout and electronics assemblies. Construction of one-line power distribution diagrams, industrial motor control diagrams and commercial lighting layout.

**1 Class Hour, 2 Laboratory Hours**

**Prerequisites:** MET 113 Engineering Drawing I and EET 255 Electronics I

† **EET 241 Energy Conversions and Control Systems I & Laboratory** **4 Credits**

Theory, operation and application of d-c machines, and their magnetic and solid state control. Theory and application of single and polyphase power transformers and rectifiers. Application of industrial control systems.

**3 Class Hours, 3 Laboratory Hours**

**Prerequisite:** EET 150 Electronic Devices

† **EET 242 Energy Conversions and Control Systems II & Laboratory** **4, 1 Credits**

Generation and use of three-phase power. Theory, operation and application of a-c motors and controls. Principles of open and closed loop systems. Theory, operation, application of industrial equipment used in control systems.

**4 Class Hours, 3 Laboratory Hours**

**Prerequisite:** EET 241 Energy Conversions and Control Systems I

\*† **EET 245 Energy Conversions and Control Systems** **4 Credits**

D-c and a-c electrical machines theory, applications, and control. Single phase and polyphase power transformers and rectifiers. Application of industrial control systems. (Not offered during 1984-85 academic year).

**3 Class Hours, 2 Laboratory Hours**

**Prerequisite:** EET 126 Circuits II

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**

† These courses carry separate grades for lecture and laboratory

† Combined lecture-laboratory courses; final grade depends on successful completion of both parts

† **EET 251 Electronic Circuitry & Laboratory** **3, 1 Credits**

A second course in Electronics that incorporates the devices introduced in EET 150 Electronic Devices into representative circuits of moderate complexity. These include multi-stage tuned amplifiers, instrument and transducer amplifiers, op-amp active filters and other related data acquisition circuits. Practical considerations including heat sinking, noise, electromagnetic interference, and appropriate device selection. The BASIC and FORTRAN IV computer languages are required for applications software used to design and analyze multi-stage and active filter circuits.

**3 Class Hours, 3 Laboratory Hours**

**Prerequisite:** EET 150 Electronic Devices

† **ET 252 Electronic Systems & Laboratory** **3, 1 Credits**

A third course in Electronics that uses the circuit concepts used in EET 251 Electronic Circuitry to develop larger systems currently used in the electronics field. These include transducers, interface and data acquisition systems, switchmode power supplies, telecommunications, phase locked loops, television and communication systems. Emphasis on interface between the analog and digital world. Computer used throughout the semester to aid in design and debug of systems.

**3 Class Hours, 3 Laboratory Hours**

**Prerequisite:** EET 251 Electronic Circuitry

\*† **EET 255 Electronics I** **4 Credits**

A first course in Electronics introducing the devices fundamental to the field. Introduction of semiconductor diodes, bipolar and field effect transistors, thyristors, op-amps. Design and analyze representative circuits based on these building blocks.

**3 Class Hours, 2 Laboratory Hours**

**Prerequisite:** EET 126 Circuits II

\*† **EET 256 Electronics II** **4 Credits**

A second course in Electronics that incorporates the devices introduced in EET 255 Electronics I into representative circuits of moderate complexity. These include multi-stage tuned amplifiers, op-amp active filters, and other related data acquisition circuits. Practical considerations including heat sinking, noise, electromagnetic interference, and appropriate device selection.

**3 Class Hours, 2 Laboratory Hours**

**Prerequisite:** EET 255 Electronics I

\*† **EET 257 Electronics III** **4 Credits**

A third course in Electronics that uses the circuit concepts used in EET 256 Electronics II to develop larger systems currently used in the electronics field. These include switchmode power supplies, phase locked loops, communication systems, and interfacing systems. Computer used to aid in design and debug of systems.

**3 Class Hours, 2 Laboratory Hours**

**Prerequisite:** EET 256 Electronics II

† **EET 267 Digital Electronics and Microprocessors I & Laboratory** **3, 1 Credits**

Study of number systems, logic gates (TTL/CMOS), counters, shift registers, codes, types of memories, Boolean algebra, reduction theorems, and black box design applied to data transmission, computer arithmetic, and microprocessor operations. Microprocessor (8080, 8085, and Z80) assembly language programming using assemblers, disassemblers, monitors, loaders, logic analyzers, and other tools related to industrial applications of microcomputers. Internal operation of a computer from a block diagram approach. Applications include software scrolling, IC testing, traffic controllers, display systems, and math operations. Appropriate laboratory exercises provide hands-on experience in three areas—digital circuitry, microprocessor assembly language, and microprocessor interface hardware.

**3 Class Hours, 2 Laboratory Hours**

**Prerequisites:** EET 150 Electronic Devices or EET 255 Electronics I and CST 122 Scientific Computer Programming—FORTRAN or CST 141 FORTRAN Programming with Graphic Applications



**\*† EET 268 Digital Electronics and Microprocessors II 4 Credits**

Use of modern microprocessors (Z80, 8086, and 68000) in real time control applications such as testing complex circuitry using microcomputers, display systems, speech synthesis, EPROM and EEPROM programming, ultrasonic techniques, data manipulation, multiplexing, video games, satellite receivers, encryption techniques, disk controllers, array processors, and other modern topics in the microcomputer world. Use of development systems (UNIX based), logic analyzers, and high level languages. Students undertake a project related to the field and study the differences between eight other popular microprocessors. Assembly language skills learned in EET 267 Digital Electronics and Microprocessors I are tuned and further software development takes place.

**3 Class Hours, 2 Laboratory Hours**  
**Prerequisite:** EET 267 Digital Electronics and Microprocessors I

**EET 299 Independent Study 2-4 Credits**

The student undertakes an independent project in his/her specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a job-related assignment. Any independent study project is based on instructor availability.

**Prerequisite:** Departmental Approval

**ENGINEERING**

**EGR 100, 200 Orientation 0 Credits**

Attendance at these sessions assures the Engineering Science student a smooth transition into and out of Broome Community College. Guest speakers discuss common problems engineering students encounter. Representatives from transfer schools introduce their respective institutions to students. Common exams will be scheduled during these sessions.

**2 Class Hours**

**EGR 150 Engineering Graphics 2 Credits**

Fundamental course in drawing techniques and interactive computer graphics, graphing, orthographic projecting, dimensioning, sections, true length, true size, relationships between lines and planes, interactive three-dimensional graphics. For Computer Science and Engineering Science students.

**1 Class Hour, 2 Laboratory Hours**  
**Corequisite:** EGR 100 Orientation

**EGR 281 Mechanics (Statics) 3 Credits**

Fundamental concepts of the statics of rigid bodies developed by using a vector analysis approach. Force systems, centroids and centers of gravity, analysis of structures, shear and bending moments, friction and moments of inertia.

**3 Class Hours**  
**Prerequisite:** 1 year of Calculus and PHY 181 Physics I  
**Corequisite:** EGR 200 Orientation

**EGR 282 Mechanics (Dynamics) 3 Credits**

Concepts using vector analysis approach to kinematics and kinetics of particles, systems of particles, kinematics and kinetics of rigid bodies. Forces, mass, acceleration impulse, momentum, work and energy techniques.

**3 Class Hours**  
**Prerequisite:** EGR 281 Mechanics (Statics)  
**Corequisite:** EGR 200 Orientation

**EGR 284 Materials Science 3 Credits**

Atomic model, bonding, lattice concept, crystal types, imperfections, stress and temperature effects, phase diagrams, alloys, ceramics, glass, concrete, polymers, corrosion.

**3 Class Hours**  
**Prerequisite:** PHY 182 Engineering Physics II and CHM 146 Chemistry  
**Corequisite:** EGR 200 Orientation

**EGR 285 Electrical and Electronic Circuits 3 Credits**

Units, Coulomb's Law, Ohm's Law, Faraday's Law, Kirchhoff's Law, energy and power. Resistance, inductance and capacitance parameters. Series and parallel circuits, superposition theorem, network analysis by mesh currents, nodal techniques. Thevenin's Theorem, network reduction. Techniques for solving step response, pulse response, forced response, natural response and complete response. A-c circuits, phasors, impedances, resonance.

**3 Class Hours**  
**Prerequisite:** 1 year of calculus and 1 year of physics including electricity and magnetism or permission of instructor  
**Corequisite:** EGR 200 Orientation

**EGR 286 Engineering Analysis 1 Credit**

Introduction to microprocessors with digital logic.

**1 Class Hour**  
**Prerequisite:** 1 year of calculus and high-level programming language  
**Corequisite:** EGR 200 Orientation

**EGR 287 Engineering Science Laboratory I 1 Credit**

Experimentation in electrical and electronic circuits, digital logic, heat and sound.

**3 Laboratory Hours**  
**Prerequisite:** 1 year of calculus and 1 year of laboratory physics  
**Corequisite:** EGR 285 Electrical and Electronic Circuits

**EGR 288 Engineering Science Laboratory II 1 Credit**

Experimentation in atomic and nuclear physics, light and microprocessors.

**3 Laboratory Hours**  
**Prerequisite:** EGR 287 Engineering Science Laboratory I  
**Corequisite:** EGR 286 Engineering Analysis

**EGR 299 Independent Project 2-4 Credits**

The student undertakes an independent project in his/her specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.

**Prerequisite:** Departmental Approval

**ENGLISH**

*After completing a writing sample, students with serious deficiencies will be required to enroll in ENG 090 Basic Language Skills or ENG 110S Written Expression I. Students generally begin a composition sequence with ENG 110 Written Expression I.*

**ENG 090 Basic Language Skills 0 Credits**

Writing workshops designed to improve a student's mastery of composition skill, including patterns of sentence structure and the recognition and correction of common errors in grammar and usage. (This course not applicable toward any degree).

**Minimum 3 Class Hours**

**ENG 106, 107, 108 English-as-a-Second Language**

See page 93.

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**

**† These courses carry separate grades for lecture and laboratory**

**ENG 110 Written Expression I****3 Credits**

Study and practice in the composition of ideas and information. Sentence and paragraph development, unity, coherence, style. Nature of language, including investigation of various aspects of communication to stimulate critical thinking.

**3 Class Hours****Prerequisite:** Placement test or ENG 090 Basic Language Skills**ENG 110S Written Expression I****3 Credits**

Same as ENG 110 Written Expression I with one additional hour of supplemental help.

**4 Class Hours****ENG 120 Written Expression II****3 Credits**

Further study and practice in critical and evaluative writing based upon analysis of major types of imaginative literature. Familiarization and practice with research procedures.

**3 Class Hours****Prerequisite:** ENG 110 or ENG 110S Written Expression I or permission of instructor**ENG 150 Technical Writing****3 Credits**

Principles and practice of writing to be eventually required of students in technology programs as part of their professional duties. Emphasis on analysis and preparation of reports, articles and technical correspondence.

**3 Class Hours****Prerequisite:** ENG 107 English as a Second Language, Advanced or ENG 110 or ENG 110S Written Expression I or permission of instructor**ENG 160 Expository Writing****3 Credits**

An intensive course in expository, persuasive and critical writing for students who have already mastered the basic skills of written expression. Emphasis on critical reading of professional essayists and articles.

**3 Class Hours****Prerequisite:** ENG 120 Written Expression II**ENG 163 Introduction to Journalism****3 Credits**

Journalistic writing and publication, practices utilizing student publication for workshop and actual publication situations. Designed primarily for editors and staff members of Fulcrum, the campus newspaper.

**ENG 163L Journalism Laboratory: Fulcrum****1 Credit**

Reporting, writing and editing the Fulcrum, the campus newspaper. Designed for editors and staff members of the Fulcrum.

**3 Laboratory Hours (May be repeated for credit)****ENG 164 Journalism Seminar and Practicum****3 Credits**

Seminars presented by professional journalists treating timely and important aspects of news writing and newspaper production. Practicum involving hands-on journalistic activities with local and campus newspapers and information agencies.

**3 Class Hours****Prerequisite:** ENG 163 Introduction to Journalism or ENG 110 or ENG 110S Written Expression I plus permission of instructor**ENG 165 Creative Writing—Publication****4 Credits**

Designed to provide students interested in imaginative writing with the opportunity to investigate concepts and to practice techniques implicit in prose, poetry and drama. Class discussion, workshops and personal conferences with the instructor. Writing, evaluating and arranging of material for a campus literary magazine.

**3 Class Hours plus Workshop Hours****ENG 166 Creative Writing****3 Credits**

Designed to provide students interested in imaginative writing with the opportunity to investigate concepts and to practice techniques implicit in prose, poetry and drama. Class discussion, workshops and personal conferences with the instructor.

**3 Class Hours****ENG 299 Independent Study: English****3 Credits**

An individual student project concerned with advanced work in a specific area of language or literature. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

**Prerequisite:** One semester of college level work.**ENGLISH-AS-A-SECOND-LANGUAGE (ESL) COURSES**

International students and residents of other nations may be admitted to the College if they meet special entrance requirements (see page 26.) However, admission to the College does not guarantee admission into a particular degree program. All degree programs require English language proficiency equivalent to ENG 106. Students who do not meet this requirement but satisfy other College admission requirements for foreign students are placed into an English-as-a-Second-Language program (ESL) designed to bring their language competency up to a level appropriate for success at most American colleges and universities. Placement is determined after the student arrives on campus and depends on the special language exam administered by the English Department. For students entering at the lowest level of English language proficiency, the following two semester program will be necessary.

**Semester I (ESL 103 series)**

Course	Credits
ESL 103 .....	5
ESL 104 .....	4
ESL 105 .....	4
SAC 110 (see p. 96) .....	2
Elective from regular curriculum .....	3
	18

**Semester II (ESL 113 series)**

Course	Credits
ESL 113 .....	4
ESL 114 .....	4
ESL 115 .....	4
Electives from regular curriculum .....	3-6
	15-18

**ESL 103 English as a Second Language, Grammar Review****5 Credits**

Intensive review of pre-intermediate levels of the English language for international students. Emphasis on listening, reading, speaking and some aspects of writing. Audio-lingual laboratory. (This course is not acceptable for credits toward a degree.)

**4 Class Hours, 2 Laboratory Hours****ESL 104 English as a Second Language, Basic Speech****4 Credits**

To provide international students with practice, articulation and vocabulary needed to increase self-confidence in English conversation, discussion in the classroom and other daily situations. Audio-lingual laboratory. (This course is not acceptable for credits toward a degree.)

**3 Class Hours, 2 Laboratory Hours****ESL 105 English as a Second Language, Basic Reading****4 Credits**

Review of English sound-symbol correspondences, utilization of brief recombinations of variations of narratives and dialogues, and acquisition of simple reading techniques through exposure to uncomplicated reading selections. Vocabulary and reading comprehension development, audio-lingual practice—active, passive, comparative. Audio-lingual laboratory. (This course is not acceptable for credits toward a degree.)

**3 Class Hours, 2 Laboratory Hours**



**ESL 113 English as a Second Language,  
Intermediate Composition 4 Credits**

Study of the English language for international students with listening, reading, speaking, writing skills on the intermediate level. Language workshops emphasizing grammar, syntax, vocabulary and composition. Audio-lingual laboratory. (This course is not acceptable for credits toward a degree.)

**3 Class Hours, 2 Laboratory Hours**

**Prerequisite:** ESL 103 English as a Second Language, Grammar Review or equivalent

**ESL 114 English as a Second Language,  
Intermediate Speech 4 Credits**

Designed for international students emphasizing free and controlled conversation and discussion. Continues practice in articulation, phrasing and vocabulary building. Audio-lingual laboratory. (This course is not acceptable for credits toward a degree.)

**3 Class Hours, 2 Laboratory Hours**

**Prerequisite:** ESL 104 English as a Second Language, Basic Speech or equivalent

**ESL 115 English as a Second Language,  
Intermediate Reading 4 Credits**

Study of lexical, grammatical, and social-cultural meaning through intensive and extensive reading. Establishment of reading fluency and independence in English. Continues development of vocabulary and reading comprehension. Direct and audio-lingual practice with selected texts and exercises. Audio-lingual laboratory. (This course is not acceptable for credits toward a degree.)

**3 Class Hours, 2 Laboratory Hours**

**Prerequisite:** ESL 105 English as a Second Language, Basic Reading or equivalent

Students who enter at the ESL 103 or ESL 113 level will require more than 2 years to complete a degree. For degree programs requiring six credit hours of English Composition, students may use ENG 106, 107, 108, 110, 120 or 150 depending on their degree program requirements.

**ENG 106 English as a Second Language,  
Intermediate II 3 Credits**

Expanded study of the English language for international students. Emphasis on the development of basic English compositional skills. Continued practice in listening, reading and speaking.

**3 Class Hours**

**Prerequisite:** ESL 113 English as a Second Language, Series or equivalent

**ENG 107 English as a Second Language,  
Advanced I 3 Credits**

Advanced study and practice in the composition of ideas and information for international students. Sentence and paragraph development, unity, coherence, style. Writing workshops for intensive practice in the formation of standard and idiomatic English. Investigation of the nature of language and various aspects of communication to stimulate critical thinking.

**3 Class Hours**

**Prerequisite:** ENG 106 English as a Second Language, Intermediate II or equivalent

**ENG 108 English as a Second Language,  
Advanced II 3 Credits**

Further study and practice in critical and evaluative thinking and writing for international students, based upon analysis and exposure to prose as well as major types of imaginative literature. Additional practice and familiarization with research procedures. Writing workshops and individual conferences to guide the international student through writing assignments.

**3 Class Hours**

**Prerequisite:** ENG 107 English as a Second Language, Advanced I

**FIRE PROTECTION TECHNOLOGY**

**\*FRS 101 Fire Prevention and Protection 3 Credits**

Methods, policies and procedures relative to establishing and operating appropriate fire prevention and protection programs. (Not offered in 1984-85 academic year).

**3 Class Hours**

**\*FRS 103 Fire Fighting Tactics and Strategy 3 Credits**

Focus on pre-planning and the development of fire fighting tactics appropriate for a wide variety of hazards. Review of basic information and some local conditions. The case study method is used to develop plans and tactics relating to the student's own departments.

**3 Class Hours**

**\*FRS 105 Arson Investigation 3 Credits**

Fire investigations and arson. Responsibilities of the arson investigator, tools of the investigator, photography, electronic devices, laws pertaining to arson, motives and tools of the arsonist, courtroom procedures. A field experience will be included.

**3 Class Hours**

**\*FRS 107 Legal Aspects of the Fire Service 3 Credits**

Laws and regulations as they pertain to the fire service and its personnel. Legal terminology necessary for the interpretation of pertinent laws and decisions. Legal status of the fireman, his rights, duties and liabilities. Responsibilities and powers of the service in enforcement of ordinances and codes.

**3 Class Hours**

**\*FRS 108 Building Construction  
for Fire Science 3 Credits**

Fire fighters are confronted with many unknown factors at the fire ground. Among these is the unknown structural stability of the buildings they must enter. Basic principles of building construction and design with emphasis focused on fire protection concerns. Building materials included.

**3 Class Hours**

**\*FRS 200 Hazardous Materials 3 Credits**

Chemicals and chemical processes most closely involved in fire protection and fire fighting. Use, storage, transportation and disposal of hazardous materials with emphasis on flammable liquids, flammable solids, oxidizing materials, corrosive liquids, compressed gases.

**3 Class Hours**

**Prerequisite:** Chemistry

**\*FRS 201 Fire Service Hydraulics 3 Credits**

Application of the laws of mathematics and physics to properties of fluid states, force pressure and flow velocities. Emphasis in applying principles of hydraulics to fire-fighting problems.

**3 Class Hours**

**Prerequisite:** MAT 139 Algebra

**\*FRS 205 Fire Department Administration 3 Credits**

Organization of fire departments with emphasis on personnel management, distribution of equipment, maintenance of records, communications, data collection and community relations. ISO Grading Schedule.

**3 Class Hours**

**\*FRS 210 Fire Safety-Building Design 3 Credits**

Advanced principles of building design, stability, collapsibility, testing procedures, emergency operations, review of accidents, field trips.

**3 Class Hours**

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**

**FRS 250 Special Topics****1-3 Credits**

Exploration of special topics in Fire Protection Technology. May be repeated since topics will vary from semester to semester.

**FRS 299 Independent Study: Fire Service****1-3 Credits**

An individual student project in an area of fire protection or service beyond the scope of regular coursework. Conducted under supervision of coordinator and approved by department chairperson.

**Prerequisites:** 6 Credits in FRS coursework and 6 Credits in General Education courses

**FRENCH****FRE 101, 102 Beginning French****4, 4 Credits**

Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.

**4 Class Hours****Prerequisite:** FRE 101 Beginning French for FRE 102**FRE 201 Intermediate French I****3 Credits**

Intensive review of grammar and syntax and oral practice in classroom and audio-lingual laboratory. Reading and discussion of works selected by the instructor.

**3 Class Hours****Prerequisite:** FRE 102 Beginning French**FRE 202 Intermediate French II****3 Credits**

Reading of literary works of recognized authors. Continuation of grammar, syntax and oral practices in classroom and audio-lingual laboratory.

**3 Class Hours****Prerequisite:** FRE 201 Intermediate French I**GEOGRAPHY****GEO 110 Physical Geography****3 Credits**

Interrelationships of global systems of climate, vegetation, soils, landform development and their significance to humans. The impact of human presence upon natural systems.

**3 Class Hours****GERMAN****GER 100 Practical German: 10 Minutes a Day****2 Credits**

Practical and simplified approach to speaking and understanding German. Emphasis on important and necessary aspects of everyday communication. Vocabulary and pronunciation acquisition through use of instructor's expertise, flash cards, stickers, illustration, and sign recognition. (Does not satisfy language requirement).

**2 Class Hours****GER 101, 102 Beginning German****4, 4, Credits**

Basic principles of grammar and syntax. Emphasis on oral practice in classroom. Written homework assignments, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.

**4 Class Hours****Prerequisite:** GER 101 Beginning German for GER 102**HEALTH SERVICES****HSV 101 Cardio-Pulmonary Resuscitation****½ Credit**

Procedures necessary in administering CPR in emergency situations. American Red Cross modular method of teaching with certification. Performance of mastery level learning by demonstration and exam. Required for all Health Science students. Will be given in 2-hour sessions to make a total of 8 hours.

**8 Hours for semester****HSV 110 Contemporary Health Issues (TV Course)****3 Credits**

Action-oriented course designed to identify and examine major health issues of our time. Advances in medical science and changes in life style over the past 50 years have altered the health concerns confronting the nation's population. Large numbers of health problems are self-inflicted today, the results of personal and social decisions, ignorance and apathy. Designed to counteract apathy, dispel myths, and provide accurate information upon which to make decisions affecting individual and social health.

**30 Half-Hour TV Presentations—To be shown on home TV on WSKG-TV (Channel 46) and/or Cable TV**

**HISTORY**

*HIS 100 The Rise of the West and HIS 115 Modern Global History are core courses required of all Liberal Arts students and are prerequisites for some other history (HIS) courses. However, even where it is not a prerequisite, students are urged to complete one of these courses before enrolling in any other history course.*

**HIS 100 The Rise of The West****3 Credits**

Introduction to both the study of history and the evolution of modern society, including its basic ideas, values and institutions, through an examination of Western Civilization. The Age of Transition—the Renaissance, the Reformation, the Scientific Revolution, and the Enlightenment. The Industrial Transformation, appearance of modern constitutional and authoritarian government, major socio-political ideologies—liberalism, socialism, communism, nationalism, imperialism, fascism, totalitarianism. The intellectual crisis of the 20th Century, World Wars I and II.

**3 Class Hours****HIS 115 Modern Global History:  
The World in Transition****3 Credits**

Historical development of Western Civilization in the 19th-20th centuries, contrasted with selected non-Western societies. The key theme of the effects of modernity examined in several aspects: the regional nature of geography and demography; the important influences of traditional values and religious beliefs in the areas selected for study; the evolution of capitalism, socialism, communism, and nationalism and how these concepts affected less developed countries; the impact of industrialization, colonialism, technology and science on the peoples of the contemporary world.

**3 Class Hours**



## CIVILIZATION SURVEYS (HIS 130-161)

Liberal Arts students may select any one of the following courses in order to satisfy the remainder of the history requirement.

### HIS 130 United States History I **3 Credits**

The United States from 1607 to 1898. The colonies, Revolution, Constitution, early national period, Age of Jackson, expansion, Civil War and Reconstruction, the West and the Gilded Age. Survey of political, economic, cultural developments through the 19th Century.

**3 Class Hours**

### HIS 131 United States History II **3 Credits**

The United States from 1898 to the present. The American Empire, progressive reforms, World War I, the Twenties, Depression, New Deal, World War II and the Cold War, post-war domestic issues.

**3 Class Hours**

## SPECIAL TOPICS IN HISTORY (HIS 170-199)

### HIS 170 The Future as History: A Look at the 21st Century United States **3 Credits**

Does the future have to be a shock? The objective of this course is to prove it does not have to be. Three or four possible courses which the next 100 years may take will be plotted, using knowledge of the economic, political and social developments of the past 100 years of U.S. history and a basic understanding of the present day situation.

**3 Class Hours**

**Prerequisite:** HIS 130 United States History I or HIS 131 United States History II or POS 201 Introduction to American Government

### HIS 175 Local History **3 Credits**

The early history of our local area including the late 18th Century Indian communities and the growth of 19th Century white settlements through development of industries and institutions from the days of the frontiersmen to the era of the railroads and the factory hands. Historical methods of research. An historical walking tour of Binghamton, investigation of historical records on the premises of cooperative local institutions, and observation of contributions to local history. (Formerly HIS 231).

**3 Class Hours**

### HIS 180 Utopia: The History of Perfect Societies **3 Credits**

Examines the relationship between the "real" and the "ideal" in fictional and actual utopian communities. Comparisons of utopian thought from the classical, medieval and modern periods, from the Garden of Eden to the contemporary commune. Writings of Plato, More, Condorcet, Owen, Saint-Simon, Fourier, Marx, Wells, Huxley, Teilhard de Chardin, Wagar and others.

**3 Class Hours**

### HIS 183 Woman as a Force in History **3 Credits**

Women's contributions to the evolution of Western institutions. Exploration of the origins of myths about women, women's roles in modern society, evolution of modern feminism. (Formerly HIS 227).

**3 Class Hours**

### HIS 185 Hitler and The Nazi Dictatorship **3 Credits**

Origins of National Socialism, role of Adolf Hitler, road to Nazi Dictatorship, Nazi political and social revolutions, Hitler's foreign policy and Europe's reaction, World War II and Hitler's "New Order", Nazi system of persecution and genocide, collapse of the 1,000-year Reich, legacy of the Hitler period.

**3 Class Hours**

### HIS 186 Modern American Social History **3 Credits**

Historical currents of social change and reform in the 20th Century from the latter part of the 19th Century through the "Great Society" era to the current "Voluntarism." Reformist themes bearing on health, welfare, labor, women's suffrage, civil rights movement and recent challenges to traditional American family structures and values against the backdrop of hostile and supportive private groups. Creation of public institutions to meet human needs, such as Social Security. Response of the courts to organized reformist pressures. Contemporary trends suggest major changes after a half century of government intervention in social needs.

**3 Class Hours**

### HIS 190 The World Since 1945 **3 Credits**

An overview of the changing patterns in world affairs since the end of World War II in 1945. For example, emergence of the Third World, the Cold War, responses to scientific/technological change, insurgent movements, attempts at world organization/disarmament, the energy/ecology crisis, the various trouble spots like the Middle East, Panama Canal, Berlin.

**3 Class Hours**

**Prerequisite:** HIS 100 The Rise of the West or HIS 131 United States History II or HIS 115 Modern Global History

## SHORT MODULES (HIS 200-295)

The department offers special short modules of courses that carry one credit each. These deal with concentrated topics in history and are less than one semester in length. For example, modules have been given in "The Great Man in History" series focusing on Adolf Hitler, Fidel Castro, Charles Darwin and Chairman Mao Tse-tung, each covering a 5-week period.

### HIS 200 Series—Great Figures in History **1 Credit**

Examining the advantages and disadvantages of using a biographical approach to the study of a particular period in history. In analyzing a "great figure," the student studies the interconnections between the actions of a great person, the role of chance and pressures of major social forces in shaping the course of human history.

**3 Class Hours (For 5 weeks)**

### HIS 299 Independent Study **1-3 Credits**

An independent student project which is beyond the scope of courses currently offered by the department, directed by a faculty member with approval of the department chairperson. Independent study does not satisfy the Liberal Arts requirement in history, and it may not be taken in lieu of a 100-series course.

**Prerequisite:** HIS 100 The Rise of the West or HIS 115 Modern Global History

## HUMAN DEVELOPMENT COURSES

*Across the nation students have indicated that they want the opportunity in college to identify, pursue and accomplish personal goals, to develop healthier self-concepts, to develop more effective levels of self-understanding and to become open human beings who can build trusting relationships with others. The student affairs courses can be one means of facilitating humanistic objectives espoused by "new" college students.*

### SAC 101 The Individual in a Changing Environment **3 Credits**

Individual interaction and reading designed to foster understanding and application of psychological and emotional growth. Basic class material is the individual and group analysis of student's experience within an immediate unstructured setting. Focus on analysis and organization of experience into a personally rewarding conception of growth. Individual self-development projects outside the class.

**3 Class Hours**

**SAC 110 Orientation for International Students****2 Credits**

An orientation course for international students designed to aid in their adjustment as students at Broome Community College. Study skills, academic regulations, the American educational system, individual educational and vocational goals, American customs. Especially intended for students during their initial semester of enrollment in conjunction with English-as-a-Second-Language course offerings, such as ESL 103, 104, 105. (This course is not acceptable for credits toward a degree).

**2 Class Hours****SAC 250 Career Exploration****3 Credits**

How to plan, establish, change a career. The process of deciding on a career and implementing career goals, assessment of values, interests and skills plus their relationship to occupations. Analysis of the labor market needs, identification of employers and sources of occupation information, the means of securing employment through proposals, resumes, applications and job interviews. Supportive small group atmosphere. Class activities include discussion, speakers, testing, and individual counseling.

**3 Class Hours****SAC 251 Career Search****1 Credit**

For people who know their interests, skills, and values but are not sure which career field or life styles would be most satisfying to them. Sources of occupational information, analysis of labor market needs, what colleges and college majors best prepare students for their career goals. For students who are beginning a career, changing careers, or returning to the job market. For students who scored 13-18 on My Vocational Situation. Supportive small group atmosphere. Discussion sessions, speakers, testing, field work, and individual counseling.

**2 Seminar Hours****SAC 295, 296 Seminar in Human Potential****3, 2, Credits**

Human Potential focuses on the person's own resources, strengths, motivators, values and successful and satisfying experiences. Human potential sessions are positive group experiences working on and with the potential and strengths of the feeling concerning one's self and others by utilizing specific procedures.

**3, 2 Class Hours**

## INDUSTRIAL SAFETY AND OCCUPATIONAL HYGIENE

**\* SAF 100 OSHA Codes and Regulations****3 Credits**

In-depth study of the Federal Occupational Safety and Health Act of 1970 (OSHA). Other pertinent laws for the protection of the ambient and occupational environments, how they are put together, what is pertinent and how they are used.

**3 Class Hours****\* SAF 101 Accident Investigation and Prevention****3 Credits**

Identification of present and future hazards in facilities, operations and products. Methods of investigation of hazards, reports of injuries, property damage and their causes. Development of accident prevention and loss control methods, procedures and programs.

**3 Class Hours****\* SAF 102 Design and Evaluation  
of a Safety Program****3 Credits**

Development of comprehensive program to protect the employee from potential health hazards in the work environment. Elements of a comprehensive industrial hygiene survey: evaluating existing control mechanisms, review of process or operations, inventory of hazardous materials sources, field study and results, corrective action plan and methods of control.

**3 Class Hours****\* SAF 105 Material Handling and Storage of  
Special and Common Products****3 Credits**

An in-depth study of handling and storage principles and procedures. Personal injuries, improper techniques and hazards of special materials, as well as correct methods and procedures. Visits to industrial sites.

**3 Class Hours****\* SAF 110 Ventilation and Exhaust****3 Credits**

Principles of ventilation and ventilation control. Students will visit various industries to study the practical application of systems, engineering problems, methods of control of industrial wastes through the systems.

**3 Class Hours****\* SAF 111 Machine Guarding****3 Credits**

Various types of methods and systems in use, advantages and disadvantages of types, design of appropriate machine guarding for work being done. Visits to industrial sites.

**3 Class Hours****\* SAF 120 Introduction to Industrial Hygiene****3 Credits**

Fundamentals of industrial hygiene, review of basic mathematics, chemical concepts, associated biochemical concepts, industrial toxicology techniques. Use of guides, codes, regulations and standards for chemical and physical agents. concepts of a noise program and air sampling.

**3 Class Hours****Prerequisite:** Chemistry or permission of instructor**\* SAF 250 Special Topics: Safety****1-3 Credits**

An opportunity to explore in depth special topics and problems in Industrial Safety and Health. May be repeated once for credit as the subjects will vary from semester to semester.

**\* SAF 299 Independent Study****1-3 Credits**

An individual student project beyond the scope of regular coursework. Conducted under supervision of coordinator and approved by department chairperson.

**Prerequisites:** 6 Credits in Industrial Safety and Occupational Hygiene courses

## INTERIOR DESIGN

**INT 101 History of Architecture—  
Exterior and Interior****3 Credits**

Survey of exterior and interior architectural styles from Ancient Egyptian through 20th Century.

**3 Class Hours****INT 110 Interior Design I****4 Credits**

Projects in residential interior design including color coordination, floor plan, space utilization. Study of currently available resources.

**2 Class Hours, 4 Studio Hours****Prerequisite:** ART 105 Introduction to Design**Recommended:** CIV 117 Architectural Drafting and INT 101 History of Architecture—Interior and Exterior**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**



**INT 111 Interior Design II****4 Credits**

Two major projects, one commercial and one residential, stressing space utilization. Contrasting building types must be selected for the projects, one contemporary form and one traditional.

**2 Class Hours, 4 Studio Hours****Prerequisite:** INT 110 Interior Design I**INT 120 Construction and Workroom Technique I****2 Credits**

Study of processes, manufacture and installation of interior design products.

**2 Class Hours****INT 121 Specification Writing for Interior Designers****2 Credits**

Techniques used in writing specifications for interior design projects.

**2 Class Hours, 1 Studio Hour****INT 130 Rendering****2 Credits**

Perspectives of room interiors: treats the problems of representation related to light, texture and color.

**4 Studio Hours****INT 140 Fabric Analysis****2 Credits**

Types of fabrics used in interior design including methods of manufacturing, fiber and construction analysis, historical origins.

**2 Class Hours****ITALIAN****ITA 101, 102 Beginning Italian****4, 4 Credits**

Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.

**4 Class Hours****Prerequisite:** ITA 101 Beginning Italian for ITA 102**ITA 201 Intermediate Italian I****3 Credits**

Comprehensive review of grammar and structure of the language. Intensive reading of literary works as a basis for topics of conversation in Italian in the classroom. Emphasis on aural comprehension and oral practice in classroom and audio-lingual laboratory.

**3 Class Hours****Prerequisite:** ITA 102 Beginning Italian**ITA 202 Intermediate Italian II****3 Credits**

Intensive reading of literary works of recognized authors as a basis for topics of conversation in Italian in the classroom. Practice in audio-lingual laboratory.

**3 Class Hours****Prerequisite:** ITA 201 Intermediate Italian I**ITA 299 Independent Study: Italian****1-3 Credits**

An individualized student project concerned with advanced work in a specific area of Italian. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

**Prerequisite:** 3 semester hours of college level work in Italian**LITERATURE**

The Department of English recommends that students complete a composition program before taking literature courses.

**LIT 210 Studies in United States Literature I****3 Credits**

History and development of United States literature from colonial period to late 19th Century. Emphasis on several major writers of the period.

**3 Class Hours****LIT 211 Studies in United States Literature II****3 Credits**

History and development of United States literature from late 19th Century to the present. Emphasis on several major writers of the period.

**3 Class Hours****LIT 214 Studies in British Literature I****3 Credits**

History and development of British literature from the Middle Ages to the 18th Century. Selections of literary merit from prose, drama, poetry.

**3 Class Hours****LIT 215 Studies in British Literature II****3 Credits**

History and development of British literature from the beginning of the 18th Century to the middle of the 20th.

**3 Class Hours****LIT 220 The World of the Short Story****3 Credits**

An examination of the development of American, British and Continental short stories. Emphasis on theme and structure.

**3 Class Hours****LIT 230 American Drama****3 Credits**

Studies in dramatic theories, techniques and thematic problems of the American drama. (Students taking this course may also be interested in THR 101 Fine Arts: Introduction to Theatre and THR 111 Acting).

**3 Class Hours****LIT 233 World Drama****3 Credits**

Studies in dramatic theories, techniques and thematic relationships of the world drama. (Students taking this course may also be interested in THR 101 Fine Arts: Introduction to Theatre and THR 111 Acting).

**3 Class Hours****LIT 235 Tragic and Comic Vision of Shakespeare****3 Credits**

Shakespeare as both dramatist and poet. Emphasis on selected comedies, histories, tragedies.

**3 Class Hours****LIT 240 The Poetic Experience: Sight and Sound****3 Credits**

An exploration of the different modes and moods of poetic expression. A thematic and structural approach to poetry as a total experience.

**3 Class Hours****LIT 250 Portraits of Women: Searching for Understanding****3 Credits**

An in-depth examination of what it means to be a woman as presented by representative literary artists, both women and men, in critically acclaimed pieces of literature. Emphasis on 19th and 20th Century material.

**3 Class Hours**

### **LIT 253 Psychological Investigation in Literature**

**3 Credits**

The application of Jungian, Freudian and other psychological theories and insights to selected short stories, novels, and poems to promote more penetrating appreciation of characters' motivations and actions and the literary work in general.

**3 Class Hours**

### **LIT 255 Modern Existential Literature**

**3 Credits**

An investigation of the themes of alienation and the absurd in selected prose and poetry to shed light on man's current existential crisis.

**3 Class Hours**

### **LIT 257 Heritage of Modern Literature**

**3 Credits**

An attempt to define modern literature as an embodiment and development of antique themes and traditions through the comparative study of the epic, the novel and related genre.

**3 Class Hours**

### **LIT 260 Detective Fiction**

**3 Credits**

A critical study of one of the most popular literary forms of our time, designed for armchair detectives. Starting with Poe, Conan Doyle (Sherlock Holmes) and other classics in the field, the course traces the development of the detective story from its puzzle-solving beginnings to the modern psychological novel of crime and detection.

**3 Class Hours**

### **LIT 263 Children's Literature**

**3 Credits**

Children's literature with introduction to the variety of books available today and development of standards for evaluating them. Prime concern is to help the student use literature with children creatively, recognizing the importance of language, arts, communication and listening skills in cognitive development.

**3 Class Hours**

### **LIT 265 Biblical Literature**

**3 Credits**

An acquisition of the skills necessary to study the Bible. Emphasis on the Biblical narrative and its relationship to Western culture through reading and analysis.

**3 Class Hours**

### **LIT 268 Fantasy and the Anti-Story**

**3 Credits**

An overview of two popular literary types: fantasy and anti-story. History of these types, with focus mainly on 20th Century development as the types have matured. Students read non-realistic fiction.

**3 Class Hours**

### **LIT 269 Prison Literature**

**3 Credits**

An examination of the prison experience through a variety of readings in prose and poetry focusing on man's continuing struggle to understand this social phenomenon.

**3 Class Hours**

## **MARKETING COURSES**

are under the Business heading starting on page 72

## **MATHEMATICS**

### **MAT 003 Basic Mathematics Review**

**0 Credits**

Basic Mathematics Review is designed to give the student proficiency in elementary mathematics and provide a firm foundation for credit courses. It consists of three units allowing each department to select the units needed as prerequisites for its courses or programs.

**3 Class Hours**

#### **A. Arithmetic and Introduction to Algebra**

Arithmetic of whole numbers, fractions and decimals. Percent, measurement, metric units, ratio and proportion. Language of algebra, arithmetic of signed numbers, solving simple equations. Problem solving.

#### **B. Elementary Algebra**

Addition, subtraction, multiplication, division and simplification of algebraic expressions. Graphing. Solving linear equations and inequalities in two variables.

**Prerequisite: Basic Mathematics Review A**

#### **C. Geometry and Introduction to Trigonometry**

Properties and measurements of angles. Similar and congruent triangles, polygons and circles. Perimeter, area and volume measurements. Use of trigonometric ratios to solve right triangle problems.

**Prerequisite: Basic Mathematics Review A**

#### **D. Metric Conversions and Dosage Computation**

Common fractions and decimal fractions. Percentages, ratios and proportions. Metric computations. Apothecary systems. Apothecary, metric and household conversions. Calculation of dosages. Designed to meet the mathematics proficiency required for clinical nursing course.

**Prerequisite: Basic Mathematics Review B**

Basic Math Review is a self-paced course. Students use self-study texts and audio-visual aids with instructors available for individual help.

A complete sequence of Basic Math Review would begin with the first section of Arithmetic and Introduction to Algebra and end with the last section of Geometry and Introduction to Trigonometry. But few students study the entire sequence. The entry point in the sequence is determined by a placement test. The exit point is usually determined by the student's program requirements. All units are available in every scheduled section.

**This course not applicable toward any degrees.**

### **MAT 110 Consumer Mathematics**

**3 Credits**

Experience in applying mathematics to consumer matters. Learning activities include using bank accounts, preparing budgets, using credits, buying a car and house, purchasing insurance, completing income tax forms. Does not meet Mathematics requirement for AA/AS degrees.

**3 Class Hours**

### **MAT 113 Mathematics: A Liberal Art**

**3 Credits**

An introduction to the variety and structural beauty of mathematics. Inductive and deductive reasoning, games and sequences, elementary probability, statistics, statistical graphs, misleading uses of statistics, Moebius strips. Computer applications will support many of the topics. For Liberal Arts students; recommended for Fine Arts or Humanities majors; not for Science majors.

**3 Class Hours**

**Prerequisite: MAT 003A Basic Mathematics Review or equivalent**

### **MAT 117 Elementary Finite Mathematics with Algebra**

**4 Credits**

Sets, probability, matrix algebra, graphing, inequalities, linear programming, permutations and combinations, linear models of equilibrium, systems of linear equations, solving equations and inequalities.

**4 Class Hours**

**Prerequisite: MAT 003A Basic Mathematics Review or Equivalent**



**MAT 119 Modern Basic Mathematics I** **3 Credits**  
 Algebra of propositions. Algebra of sets. Systems of numeration other than base ten. Properties of the operations of addition and multiplication for the sets of whole numbers integers and rational numbers. Introduction to number theory. For Liberal Arts Students; recommended for elementary education majors. (Formerly MAT 131 Modern Basic Mathematics I).  
**3 Class Hours**  
**Prerequisite:** MAT 003B Basic Mathematics Review or equivalent

**MAT 120 Modern Basic Mathematics II** **3 Credits**  
 Real number systems, other mathematical systems. Informal geometry, congruence, measurement of areas and volumes, basic constructions. Coordinate geometry, lines, circles, equations. Inequalities and linear programming. Simple and conditional probability. Introduction to statistics.  
**3 Class Hours**  
**Prerequisite:** MAT 119 Modern Basic Mathematics I or MAT 003C Basic Mathematics Review or equivalent

**MAT 121 Finite Mathematics** **3 Credits**  
 Sets and logic, permutations and combinations, probability, independent events, expectation, vectors and matrices, inequalities and linear programming.  
**3 Class Hours**  
**Prerequisite:** MAT 003B Basic Mathematics Review or equivalent

**MAT 124 Statistics** **3 Credits**  
 Descriptive statistics, organization and presentation of data, measures of central tendency. Variance, standard deviation, binomial distribution, statistical inference. Random sampling, hypothesis testing, confidence intervals, normal distribution, analysis of variance. Chi-square distribution, students t-distribution, correlation and regression. (Formerly MAT 114 Statistics).  
**3 Class Hours**  
**Prerequisite:** MAT 003B Basic Mathematics Review or equivalent

**MAT 139 Algebra** **4 Credits**  
 Real and complex numbers, algebraic operations, functions and graphs, exponents and logarithms, linear and quadratic equations, systems of linear equations, linear inequalities, the binomial theorem, matrices and determinants.  
**4 Class Hours**  
**Prerequisite:** MAT 003B Basic Mathematics Review or equivalent

**MAT 140 Trigonometry** **4 Credits**  
 Trigonometric functions and their graphs, solution of triangles, trigonometric identities and equations, inverse trigonometric functions, position vectors, polar representation of complex numbers. DeMoivre's theorem.  
**4 Class Hours**  
**Prerequisite:** MAT 139 Algebra or equivalent

**MAT 141 Algebra and Trigonometry** **4 Credits**  
 A review of algebra and trigonometry emphasizing computational skills and technical applications. Algebraic operations, functions and graphs, exponents and logarithms, linear equations, system of linear equations and determinants. Trigonometry and the solution of triangles, trigonometric functions and their graphs, quadratic equations, vectors, complex numbers. For engineering technology students.  
**4 Class Hours**  
**Placement by technical program advisor**

**MAT 142 Applied Calculus I** **4 Credits**  
 Basic analytic geometry, distance, equations of lines. Limits, continuity and the derivative. Differentiation of polynomials, maxima and minima. Differentials and approximation, applications in kinematics and circuits. The definite integral and applications to finding area, center of gravity, volume of revolution, work done. Approximate integration, differentiating products and quotients, implicit differentiation and related rates, differentiation and integration of logarithmic, exponential, trigonometric and inverse trigonometric functions.  
**4 Class Hours**  
**Prerequisite:** MAT 141 Algebra and Trigonometry or MAT 140 Trigonometry

**MAT 146 Introduction to Calculus** **3 Credits**  
 Analytic geometry of line, circle and parabola. Functions and their graphs. Limits and continuity, differentiation—rules and applications, integration—techniques and applications. Exponential and logarithmic functions and applications. Recommended for social science, health science and business students. Not for math majors or science majors in the A.S. degree program. (Formerly MAT 122).  
**3 Class Hours**  
**Prerequisite:** MAT 139 Algebra or equivalent

**MAT 152 Discrete Mathematics** **4 Credits**  
 Topics from mathematics needed to understand the operation and use of the digital computer. Logic and truth tables, algebra of sets, relations, equivalence relations, partitions, functions. Vectors, matrices, matrix algebra, determinants. Systems of linear equations, linear programming, Gaussian elimination. Fundamental principles of counting, binomial coefficients, permutations, combinations, probability, conditional probability, Graph theory, connectivity, trees, rooted trees, directed graphs; finite state machines, strings.  
**4 Class Hours**  
**Prerequisite:** CST 113 Pascal with Structured Programming and MAT 139 Algebra

**MAT 161 Pre-Calculus Mathematics** **4 Credits**  
 Sets, the real number system, inequalities, graphing and the Cartesian Coordinate System, functions and their properties, inverse functions, exponential and logarithmic functions, trigonometric functions, systems of equations, complex numbers and theory of equations.  
**4 Class Hours**  
**Prerequisite:** MAT 139 Algebra or equivalent

**MAT 163 Calculus with Analytic Geometry I** **4 Credits**  
 The Cartesian Coordinate System, distance formula, equations of lines, functions and limits. Differentiation of algebraic functions and applications, including rectilinear motion, related rates, maxima and minima. Techniques of graphing. Summation, integration, and the Fundamental Theorem of Integral Calculus. Applications of the definite integral, including area, volume, arc length, surface area, work and liquid pressure.  
**4 Class Hours**  
**Prerequisite:** MAT 161 Pre-Calculus Mathematics or MAT 140 Trigonometry or MAT 141 Algebra and Trigonometry

**MAT 164 Calculus with Analytic Geometry II** **4 Credits**  
 Differentiation and integration of logarithmic, exponential, hyperbolic functions, inverse trigonometric, inverse hyperbolic functions and parametric expressions. Techniques of integration including integration by parts, partial fractions and trigonometric substitution. Improper integrals, indeterminate forms and L'Hopitals rule. Infinite series and convergence testing. The Polar Coordinate System and its applications. Vectors in two and three dimensions. Unit tangents and normals. Lines in three space. Dot and cross product.  
**4 Class Hours**  
**Prerequisite:** MAT 163 Calculus with Analytic Geometry I

**MAT 171 Engineering Calculus with Analytic Geometry I** **4 Credits**  
 Equations of a line, limits, continuity, derivatives of algebraic functions. Applications to curve sketching, related rates, maxima and minima, antidifferentiation. The definite integral and the Fundamental Theorem of Calculus. Applications of the definite integral including area, volume, moments and work.  
**4 Class Hours**  
**Placement by advisor**

**MAT 172 Engineering Calculus with Analytic Geometry II** **4 Credits**  
 Differentiation of trigonometric, inverse trigonometric, exponential and logarithmic functions. Integration of trigonometric and exponential functions, techniques of integration. Conic sections, hyperbolic functions, polar coordinates, plane and space vectors, scalar and vectors products.  
**4 Class Hours**  
**Prerequisite:** MAT 171 Engineering Calculus with Analytic Geometry I

**MAT 252 Mathematical Modeling with the Computer 4 Credits**

Computer techniques for the modeling and solutions of problems in numerical analysis. Error analysis, roots of equations, linear and non-linear systems of equations, calculus of finite differences, numerical integration, curve fitting, numerical solution of ordinary differential equations. The computer language Pascal is used.

**4 Class Hours**

**Prerequisites:** CST 115 Problem Solving with Pascal and either MAT 164 Calculus with Analytic Geometry II or MAT 172 Engineering Calculus with Analytic Geometry II

**MAT 263 Calculus with Analytic Geometry III 4 Credits**

Sequences, series, power series and radius of convergence. Conic sections and rotation of axes. Three dimensional analytic geometry and vectors including equations of lines and planes, scalar and vector products, cylindrical and spherical coordinates. Partial differentiation, directional derivatives, gradients, maxima and minima. Volume and other applications done by multiple integrals. Line integrals and Green's theorem.

**4 Class Hours**

**Prerequisite:** MAT 164 Calculus with Analytic Geometry II

**MAT 264 Linear Algebra 4 Credits**

Linear equations and matrices, real vector spaces, the algebra of linear transformations and matrices, determinants, eigenvalues and eigenvectors.

**4 Class Hours**

**Prerequisite:** MAT 164 Calculus with Analytic Geometry II or MAT 172 Engineering Calculus with Analytic Geometry II

**MAT 266 Introduction to Higher Mathematics 3 Credits**

Exposure to basic mathematical methods and concepts. Sets, sequences, mappings, convergence. Preparation for analysis, topology and modern algebra. Recommended for Mathematics majors, Computer Science students and Engineering Science students, as advised.

**3 Class Hours**

**Prerequisite or corequisite:** MAT 263 Calculus with Analytic Geometry III or MAT 271 Engineering Calculus with Analytic Geometry III or permission of Instructor

**MAT 271 Engineering Calculus with Analytic Geometry III 4 Credits**

Partial differentiation, gradient, maxima and minima, double and triple integrals applied to areas and volumes. Cylindrical and spherical coordinates, line and surface integrals, infinite series, Taylor's Theorem, complex numbers and functions.

**4 Class Hours**

**Prerequisite:** MAT 172 Engineering Calculus with Analytic Geometry II

**MAT 272 Differential Equations with Linear Algebra 4 Credits**

First order differential equations. Matrices, determinants and solutions of systems of linear equations. Vector spaces, Wronskians, linear transformations and differential operations. Characteristic values and vectors, real symmetric matrices, functions of matrices. Homogeneous and nonhomogeneous linear differential equations with constant coefficients, undetermined coefficients and variations of parameters. Matrix formulation of linear systems of differential equations and solution by characteristic values, the exponential matrix function and nonhomogeneous linear systems.

**4 Class Hours**

**Prerequisite:** MAT 271 Engineering Calculus with Analytic Geometry III or MAT 263 Calculus with Analytic Geometry III

**MAT 299 Independent Study 1-4 Credits**

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.

**Prerequisite:** Department Chairperson Permission

**MECHANICAL ENGINEERING TECHNOLOGY****MET 110 Introduction to Technologies ½ Credit**

Introduction to the college and its policies, placement, transfer and study skills. Reasonable proficiency in the use of the hand calculator is developed.

**1 Class Hour**

**MET 113 Engineering Drawing I 2 Credits**

Basic course that includes lettering, line and instrument exercises, orthographic projection, sketching, dimensioning, auxiliary views, sections, threads, fasteners, fits and tolerances.

**1 Class Hour, 2 Laboratory Hours**

**MET 114 Engineering Drawing II 2 Credits**

Fits and tolerances, developments and intersections, pictorial drawings and descriptive geometry.

**1 Class Hour, 2 Laboratory Hours**

**Prerequisite:** MET 113 Engineering Drawing I

**MET 115 Engineering Graphics 2 Credits**

Fundamentals of Engineering Drawing including instruments, linework, lettering geometric constructions, orthographic projection, sections, auxiliary views, pictorial drawings and dimensioning and tolerancing. Fundamentals of descriptive geometry, including visibility, true length, true shape, parallelism, perpendicularity, intersections, and developments.

**1 Class Hour, 2 Laboratory Hours**

**MET 121 Manufacturing Processes I 3 Credits**

A basic study of manufacturing materials and processes, such as casting metal, production of ferrous and non-ferrous metals and shape changing processes of hot and cold working techniques. Oxyacetylene, arc, resistance welding. Machine tool operation, instrumentation and measurement.

**2 Class Hours, 2 Laboratory hours**

**MET 122 Manufacturing Processes II 2 Credits**

Abrasives and grinding, indexing, gearing, special machining processes such as numerical control and electrical discharge machining. Advanced elements of machine tool operation including the use of grinding machines, turret lathe, honing, lapping.

**1 Class Hour, 3 Laboratory Hours**

**Prerequisite:** MET 121 Manufacturing Processes I

**MET 125 Programming Numerical Control Machine Tools 2 Credits**

Rectangular coordinate system, point to point and continuous path programming, reading and preparation of perforated tape and actual programming of certain numerical control equipment. Computer assisted programming and the relationship of group technology will be discussed.

**2 Class Hours**

**Prerequisites:** MAT 139 Algebra or equivalent and MET 122 Manufacturing Processes II or Instructor's approval.

**MET 129 Survey of Engineering Laboratories 3 Credits**

Engineering materials, physical tests and manufacturing processes encountered in mechanical technology laboratories. Lectures, demonstrations and participation in manufacturing processes, casting, welding and forging, metallurgy, strength of materials, fluids and thermodynamics, technical sketching and blueprint reading, scientific calculators. For Secondary Science students.

**2 Class Hours, 2 Laboratory Hours**



**MET 132 Applied Mechanics 4 Credits**

STATICS: Free body diagram, trusses, friction, centroids, moments of inertia.

DYNAMICS: Motion of particles and bodies without consideration of the forces required to produce or maintain motion (kinematics), unbalanced forces and the motion they produce (kinetics), work and energy, impulse and momentum.

**4 Class Hours**

**Prerequisites:** PHY 141 Physics and MAT 141 Algebra and Trigonometry or equivalent or department chairperson approval

**MET 223 Manufacturing Processes III 2 Credits**

Further experience with indexing, spiral work, cams, cylindrical grinding.

**1 Class Hour, 2 Laboratory Hours**

**Prerequisite:** MET 122 Manufacturing Processes II

**MET 235 Strength of Materials 3 Credits**

Normal and shear stress and strain, elastic and plastic deformation, torsion, stress in thin-walled cylinders, joints, shear force and bending moment in beams, beam stresses, beam deflection, multi-directional plane stress.

**2 Class Hours, 3 Laboratory Hours**

**Prerequisite:** MET 132 Applied Mechanics

**MET 238 Mechanical Design 4 Credits**

An analysis of machine motion and the design of machine elements. Analysis of motion of linkages and mechanisms for displacement, velocity, and acceleration relationships. Design and analysis of weldments, fasteners, springs, power screws, couplings, shafts, clutches, gears and bearings.

**3 Class Hours, 3 Laboratory Hours**

**Prerequisites:** MET 235 Strength of Materials and CAD 200 Introduction to Computer Graphics

**MET 241 Fluid Mechanics and Thermodynamics 3 Credits**

FLUID MECHANICS: Fluid statics and dynamics, steady flow energy equations, laminar and turbulent flow viscosity and fluid friction, flow measurement.

THERMODYNAMICS: Perfect gas law, specific heats, property and energy relationships in non-flow and steady flow processes for gases, internal combustion engine cycles, nozzles and diffusers, gas turbines.

**2 Class Hours, 3 Laboratory Hours**

**Prerequisites:** MET 132 Applied Mechanics and CST 122 Scientific Computer Programming - FORTRAN

**MET 244 Thermodynamics 3 Credits**

Property and energy relationships in steady flow processes for vapors, power and refrigeration cycles, nozzles and diffusers. Heat transfer in plane and circular geometry, film coefficients, heat exchangers.

**2 Class Hours, 3 Laboratory Hours**

**Prerequisite:** MET 241 Fluid Mechanics and Thermodynamics

**MET 246 Refrigeration and Air Conditioning 3 Credits**

Energy transfer systems and controls used for cooling an environment below the temperature of its surroundings. Air and humidity calculations, heat transfer and transmission coefficients, heating loads, distribution systems, refrigeration systems, cooling load and air conditioning calculations, controls and control systems.

**3 Class Hours**

**Prerequisite:** MET 241 Fluid Mechanics and Thermodynamics

**MET 248 Fluid Power 3 Credits**

Static and dynamic fluid force systems used for both actuation and control of mechanical devices. Applications of frequently used fluid power components and circuits.

**3 Class Hours**

**Prerequisite:** MET 241 Fluid Mechanics and Thermodynamics

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**

**MET 252 Engineering Materials and Industrial Processes 4 Credits**

Properties, applications and processing of engineering materials including metallic, non-metallic and composite materials.

**3 Class Hours, 3 Laboratory Hours**

**Prerequisite:** MET 121 Manufacturing Processes I and MET 235 Strength of Materials

**\* MET 253 Engineering Materials and Industrial Processes 3 Credits**

Properties, applications and processing of engineering materials including metallic, non-metallic and composite materials.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** MET 121 Manufacturing Processes I and MET 235 Strength of Materials

**MET 261 Engineering Statistics and Quality Control 3 Credits**

Measures of central tendency, variance, standard deviation, binomial distribution, normal distribution, statistical inference, hypothesis testing, confidence intervals, chi-square and students t-distribution, correlation and regression, similar elements of statistics as they pertain to engineering problems. Control chart analysis.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite:** MAT 141 Algebra and Trigonometry or MAT 139 Algebra

**\* MET 280 Management Decisions 2 Credits**

Objective criteria and evaluations in making management decisions. Currently accepted procedures to conceive management models and systems.

**2 Class Hours**

**\* MET 285 Time, Motion and Wage Study 2 Credits**

Analysis of time spent and methods used for industrial tasks. Relation to wage structure on individual and plant-wide basis.

**2 Class Hours**

**Prerequisite:** MAT 139 Algebra

**\* MET 286 Production Control 2 Credits**

Planning, scheduling and routing of goods through a plant from raw materials to finished products. Production control principles, the control of manufacturing processes.

**2 Class Hours**

**Prerequisite:** MAT 139 Algebra

**MET 287 Plant Layout and Materials Handling 2 Credits**

Plant arrangement as it influences industrial operations. Assembling data, coordinating operations, developing operational layouts, evaluative arrangements. Materials handling requirements, planning and evaluation.

**2 Class Hours**

**Prerequisite:** MAT 139 Algebra

**MET 295 Seminar 1-3 Credits**

An opportunity for the interested student to become involved with the process of research, formal paper preparation, formal delivery and defense of ideas presented. Also a critical evaluation of ideas set forth by others.

**Prerequisite:** As established by the Department Chairperson

**MET 299 Independent Study 2-3 Credits**

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.

**Prerequisite:** Approval of Department Chairperson

## MEDICAL ASSISTANT

### MDA 102 Medical Assisting Science

2 Credits

Introduction to the profession of medical assisting. Qualifications and duties, professional affiliation, history of medicine, ethics and professionalism, the role of the Medical Assistant. Interpersonal relations.

### MDA 106 Medical Correspondence and Communications

2 Credits

Development of correspondence and communication skills. Fundamentals of machine-dictated and written medical reports and correspondence. Patient related communications, such as reception and telephone techniques, message taking and patient information skills. For Medical Assistant students.

2 Laboratory Hours

Prerequisite: MRT 105 Medical Terminology I

### MDA 114 Standard First Aid and Personal Safety; Management of Emergencies

1 Credit

The causes, care and prevention of accidental/emergency life-saving situations. Mastery level of learning for the proficiency of basic skills. Certification by American Red Cross. Recognizing, managing and aiding the physician in medical emergencies and maintaining emergency supplies.

2 Laboratory Hours

### MDA 115 Medical Assisting Procedures

4 Credits

Clinical procedures of medical assisting in the physician's office. Use and management of diagnostic instruments and equipment. Related patient care, professional ethics and nomenclature. For Medical Assistant students.

3 Class Hours, 2 Laboratory Hours

Prerequisite: MRT 105 Medical Terminology or consent of instructor

### MDA 201 Medical Assisting Procedures

4 Credits

Introduction to basic microbiology, hematology and urinalysis. Collection and preparation of blood, urine and body fluids for laboratory analysis. Significance of test results. For Medical Assistant students.

2 Class Hours, 4 Laboratory Hours

Prerequisite: BIO 132 Human Biology II

### MDA 206 Medical Office Management

4 Credits

Medical office administrative procedures, such as accounting principles and practices, patient health records, insurance forms, banking and postal services, payroll records, patient fees and ledger cards, office machines. Mechanics of applicable medical correspondence including letters, manuscripts. Appointment scheduling, supplies and inventory. Emphasis on practical application of techniques. For Medical Assistant students.

3 Class Hours, 3 Laboratory Hours

Prerequisites: MDA 102 Medical Assisting Science and MDA 106 Medical Correspondence and Communications

### MDA 208 Medical Law, Ethics and Economics

3 Credits

Emphasizes the medical ethics which set the standards of conduct for physicians, as well as guidelines for medical assistants. Requirements to practice medicine, legal liabilities of the profession, and the importance of medicolegal consent forms. Various types of medical practices, fee determination, health insurance programs, and systems of health care delivery.

3 Class Hours

### MDA 210 Pharmacology

2 Credits

A practical course relevant to medical curriculums. Emphasizes knowledge of prescriptions and prescription writing. Basic principles of mathematics of pharmacy. Drugs governed by U.S.P. standards which are in common use and their generic-pharmaceutical relationship. Drug grouping and action relevant to human physiology. For Medical Assistant and Medical Record Technology students.

2 Class Hours

Prerequisite: BIO 132 Human Biology II

### MDA 211 Medical Assisting Procedures

4 Credits

Advanced technical procedures in medical assisting specifically oriented to the various medical specialties. Techniques of electrocardiography, audiometry and physical therapy. Field trips and practical experiences give additional background outside of the classroom. For Medical Assistant students. **(It is strongly recommended that this course be taken the semester prior to the MDA 245 Directed Practice).**

2 Class Hours, 4 Laboratory Hours

Prerequisite: BIO 132 Human Biology II and MDA 115 Medical Assisting Procedures

### MDA 245 Directed Practice

5 Credits

Directed practical experience in physician's offices, medical centers, school health departments, rehabilitation clinics, and other health care institutions, weekly seminars. For Medical Assistant students.

1 Class Hour, 16 Laboratory Hours

Prerequisites: MDA 206 Medical Office Management and MDA 211 Medical Assisting Procedures.

MDA 201 Medical Assisting Procedures and MDA 210 Pharmacology must be taken previously or concurrently

## MEDICAL LABORATORY TECHNOLOGY

### MLT 111 Introduction to Clinical Laboratory Methods and Practices

2 Credits

To acquaint the medical laboratory student with the history and scope of clinical laboratory medicine. Responsibility and professional ethics to self, employer, physician and patient. Field trips to clinical laboratory facilities. Basic clinical laboratory procedures and methodologies for urinalysis performed in laboratory sessions.

1 Class Hours, 2 Laboratory Hours

### MLT 112 Hematology

3 Credits

Anatomy and pathophysiology of blood and hemopoietic tissue. Techniques and procedures for studying and evaluating blood in health and disease. Laboratory work includes specialized hematological techniques and procedures.

2 Class Hours, 4 Laboratory Hours

Prerequisite: MLT 111 Introduction to Clinical Laboratory Methods and Practices or permission of instructor

### MLT 211 Clinical Chemistry I

4 Credits

Principles and methods of analytical clinical chemistry applied to the physicochemical measurements of body function in health and disease. Emphasis on those chemical tests related to excretion, digestion, metabolism and protein synthesis. Laboratory work includes the related chemical tests and specialized analytical instrumentation.

2 Class Hours, 6 Laboratory Hours

Prerequisite: One year general chemistry and one year biology or permission of instructor

### MLT 212 Clinical Chemistry II

4 Credits

A continuation of MLT 211 Clinical Chemistry I. Emphasis on those chemical tests related to liver function, blood gases, pH and electrolyte balance, enzyme, hormones in health and disease. The laboratory work includes the specific related chemical test and specialized analytical instrumentation.

2 Class Hours, 6 Laboratory Hours

Prerequisite: MLT 211 Clinical Chemistry I or permission of instructor



**MLT 232 Immunology and Immunohematology** **4 Credits**  
 Introduction to immunological processes, serological procedures, blood banking theory and techniques. Laboratory sessions are designed to provide experience in basic serology and blood banking.  
**3 Class Hours, 2 Laboratory Hours**  
**Prerequisite:** MLT 112 Hematology or permission of instructor

**MLT 251 Diagnostic Microbiology** **4 Credits**  
 A survey of the medically important microbes, emphasizing the diseases they cause, and the diagnostic techniques used in the clinical laboratory.  
**3 Class Hours, 4 Laboratory Hours**  
**Prerequisite:** BIO 150 or permission of instructor

**MLT 299 Independent Study** **1-4 Credits**  
 Course content covering advanced work in Medical Laboratory Technology on which the instructor and student agree. The material is beyond the scope of an ordinary course and it must be approved by the department chairperson. Conducted under the direction of a faculty member.  
**Prerequisite:** Department Approval

## MEDICAL RECORD TECHNOLOGY

**MRT 101 Medical Record Science** **3 Credits**  
 Introduction to the history of medicine and the historical development of the health care field, with emphasis on the organizational structure of health institutions. Functions of a medical record department and overview of the professional association. Definition of, standards for, and development of a medical record as to content, format, evaluation and completion. A comprehensive review of the organization of the medical staff.  
**2 Class Hours, 2 Laboratory Hours**

**MRT 105 Medical Terminology I** **2 Credits**  
 Medical terminology as correlated with anatomical systems. Suffixes, prefixes, root words and use of the medical dictionaries. For Medical Assistant and Medical Record Technology students.  
**2 Class Hours**

**MRT 107 Medical Transcription** **2 Credits**  
 Designed to introduce the student to the knowledge and skills required for medical machine transcription in a health care facility. A practical experience in transcribing including proper format and a variety of medical reports.  
**4 Laboratory Hours**  
**Prerequisite:** MRT 105 Medical Terminology I

**MRT 110 Medical Record Science** **4 Credits**  
 A study and application of the Problem Oriented Medical Record System. Purpose of classifying diseases and operations, difference between and historical development of nomenclature and classification systems. Value and use of indexes and registers. Numbering and filing systems and methods. Storage and retrieval systems.  
**2 Class Hours, 4 Laboratory Hours**  
**Prerequisite:** MRT 101 Medical Record Science

**MRT 115 Medical Terminology II** **2 Credits**  
 A continuation of MRT 105 Medical Terminology I. Emphasis on terminology associated with the integumentary, musculoskeletal, nervous, special senses, cardiovascular, digestive, respiratory, genito-urinary and endocrine systems.  
**2 Class Hours**  
**Prerequisite:** MRT 105 Medical Terminology I

**MRT 144 Directed Practice** **4 Credits**  
 Directed summer practical experience in the hospital medical record department. Development of insight and skills into the basic medical record procedures. Graduation requirement.  
**40 Laboratory Hours per week for 4 Weeks**  
**Prerequisite:** MRT 110 Medical Record Science

**MRT 202 Medical Record Science** **3 Credits**  
 In-depth study of the Tumor Registry. Overview of ambulatory care, long term care and psychiatric facilities. In-depth treatment of basic hospital and vital statistics and application of the same.  
**2 Class Hours, 2 Laboratory Hours**  
**Prerequisites:** MRT 110 Medical Record Science and BIO 132 Human Biology II

**MRT 208 Advanced Medical Transcription** **2 Credits**  
 Review of medical terminology emphasizing specialized terminology. Advanced medical transcription techniques through the use of recorded history and physical examinations, discharge summaries, consultation reports, operative reports and outpatient notes.  
**1 Class Hour, 2 Laboratory Hours**  
**Prerequisite:** MRT 107 Medical Transcription

**MRT 210 Medical Record Science** **3 Credits**  
 Principles of management and the role of the supervisor in the medical record department. Developmental and operational phase of health information systems. Trends in health care delivery systems.  
**2 Class Hours, 2 Laboratory Hours**  
**Prerequisite:** MRT 202 Medical Record Science

**MRT 216 Clinical Practicum** **1 Credit**  
 Enables the students to utilize the knowledge and skills obtained in the classroom and directed practice assignments. Students perform the functions of an actual medical record department and use the computer terminal, microfilm equipment and medical transcription word processing center.  
**2 Laboratory Hours**  
**Prerequisites:** MRT 110 Medical Record Science and MRT 144 Directed Practice

**MRT 222 Medical Legal Aspects** **3 Credits**  
 Introduction to legal aspects of medical records. Legal basis for medical practice, confidentiality. Patient's "Bill of Rights," voluntary and involuntary release of medical information. Authorizations and consents, professional liabilities, medical-moral issues such as abortion, euthanasia, sterilization, artificial insemination.  
**3 Class Hours**  
**Prerequisite:** MRT 202 Medical Record Science

**MRT 236 Quality Assurance** **2 Credits**  
 Three components of medical care evaluation—admission, concurrent review and retrospective review of patient records, audited by the medical record technician. Federal and state regulations.  
**1 Class Hour, 2 Laboratory Hours**  
**Prerequisite:** MRT 110 Medical Record Science

**MRT 245 Directed Practice** **4 Credits**  
 Directed practice experience in the hospital and related affiliation sites. Correlated with MRT 210 Medical Record Science to develop insight and skills into advanced medical record procedures.  
**16 Laboratory Hours**  
**Prerequisites:** MRT 202 Medical Record Science and MRT 144 Directed Practice

**MRT 295 Medical Record Seminar** **2 Credits**  
 Detailed study and analysis of specific problems encountered in the administration of a medical record department. Correlated with directed clinical practice. Case study and extensive literature review.  
**2 Class Hours**

## MUSIC

**MUS 101 Fine Art: Introduction to Music** **3 Credits**  
 Basic elements of music common to all forms of musical expression. Emphasis on developing listening habits, which bring the student to an informed awareness and understanding of music. Attendance at concerts and recitals.  
**3 Class Hours**

**MUS 105 Music Theory I** **3 Credits**  
 A beginning course in music theory, including basic rudiments of music. Pitch and rhythmic notation, scales and intervals. Ear training through melodic and rhythmic drills and dictation.  
**3 Class Hours**

**MUS 106 Music Theory II** **3 Credits**  
 Continuation of Music Theory I. Traditional harmony, exercises in melodic, rhythmic and harmonic dictation, aural analysis, beginning composition.  
**3 Class Hours**  
**Prerequisite:** MUS 105 Music Theory I or consent of instructor

**MUS 110 17th and 18th Century Music** **3 Credits**  
 Music and musical styles of the 17th and 18th Centuries. Emphasis on the composers and their styles and the relationship of music to the social, political and other cultural reforms of the period. (Not offered in 1984-85 academic year).  
**3 Class Hours**  
**Prerequisite:** MUS 101 Introduction to Music or consent of instructor

**MUS 111 19th Century Music** **3 Credits**  
 Important musicians and musical styles of the Romantic Period. Emphasis on developments in piano literature, the symphony orchestra and opera. Listening to selected recordings and attendance at local concerts. (Not offered in 1984-85 academic year).  
**3 Class Hours**  
**Prerequisite:** MUS 101 Introduction to Music or consent of instructor

**MUS 112 20th Century Music** **3 Credits**  
 Important musicians and musical styles in the 20th Century. Emphasis on the trends and development of music in America. Leading European composers.  
**3 Class Hours**  
**Prerequisite:** MUS 101 Introduction to Music or consent of instructor

**MUS 190 The College Choir** **1 Credit**  
 Students who sing in the College Choir receive one credit per semester. See page 30.

**MUS 191 Music Performance** **1 Credit**  
 Student who participate in the recitals or concerts of the academically-associated Broome Community College Music Performance groups receive one credit per semester.

**MUS 192 Woodwind Ensemble** **1 Credit**  
**MUS 193 Brass Ensemble** **1 Credit**  
**MUS 194 Voice Class** **1 Credit**  
**MUS 195 Jazz Ensemble** **1 Credit**  
 By audition only  
**MUS 196 String Ensemble** **1 Credit**  
 (Not for guitarists)  
**MUS 299 Independent Study: Music** **1-3 Credits**  
 An individual student project concerned with advanced work in a specific area of music. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.  
**Prerequisite:** 3 semester hours of college level work in music

## NURSING

**ADN 100 Meeting Basic Human Needs** **7 Credits**  
 Introduction to nursing concepts and principles. The total human being incorporating biophysiological and psychosocial components. Emphasis on maintaining homeostasis within the illness/wellness continuum. The needs approach, based on Maslow's Hierarchy of Human Needs, is emphasized. Skills in providing safe bedside nursing care, such as simple treatments, pharmacology and basic nutrition. Integrating knowledge of communication skills, nursing process, problems solving, mental mechanisms, normal responses to stress, crisis intervention, body responses to pathology, Adaptation of nursing intervention directed toward meeting basic needs of the chronically ill, the aging and those individuals facing death.  
**5 Class Hours, 6 Laboratory Hours**

**ADN 101 Nursing Care During the Life Cycle** **7 Credits**  
 The Life Cycle from conception to middle-age. Correlating basic human needs and the developmental tasks in each age group. The family cycle, as one of the tasks of the young adult. Emphasis on preparation for parenthood, the experience of parenthood, and the psychosocial implications of the young family. Learning principles identified and incorporated into the nursing process. Situational and maturational crises as normal aspects of the life cycle. Adaptation of nursing intervention directed toward meeting basic needs of the middle aged. Nursing intervention for diagnostic testing.  
**5 Class Hours, 6 Laboratory Hours**  
**Prerequisites:** ADN 100 Meeting Basic Human Needs

**ADN 203 Immobility Concepts** **4 Credits**  
 The nursing process as it meets the needs of individuals experiencing complex physiological and psychological problems due to immobility. Concepts of neurological, orthopedic and sensory deprivation nursing. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.  
**3 Class Hours 4½ Laboratory Hours**  
**Prerequisites:** ADN 101 Nursing Care During Life Cycle and BIO 132 Human Biology II

**ADN 204 Regulatory Concepts** **4 Credits**  
 The nursing process is applied to the needs of individuals with disturbances of the regulatory physiological mechanisms. Content includes nursing concepts of stress, fluids and electrolytes, endocrinology. Related health behavior and teaching. Extended campus laboratory experience is correlated. Successful achievement in the extended laboratory is required.  
**3 Class Hours, 4½ Laboratory Hours**  
**Prerequisites:** ADN 101 Nursing Care During Life Cycle and BIO 132 Human Biology II



**ADN 205 Psychological Concepts I****2 Credits**

The nursing process as it meets the needs of individuals experiencing psychological stress. Psychiatric nursing concepts applied to behavioral disturbances. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

**1 Class Hour, 3 Clinical Hours**

**Prerequisites:** ADN 101 Nursing Care During Life Cycle and BIO 132 Human Biology II

**ADN 206 I, I and O Concepts****4 Credits**

The nursing process as it meets the needs of individuals with complex physiological and/or psychological stress due to problems of inflammation, infection and obstruction. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

**3 Class Hours, 4½ Clinical Hours**

**Prerequisites:** ADN 101 Nursing Care During Life Cycle, ADN 203 Immobility Concepts, ADN 204 Regulatory Concepts, ADN 205 Psychological Concepts I, BIO 132 Human Biology II and BIO 150 Microbiology.

**AND 207 Oxygenation Concepts****4 Credits**

The nursing process is applied to needs of individuals experiencing disturbances of oxygenation. Broad concepts applied to problems of the hemopoietic, respiratory, vascular and cardiac systems. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

**3 Class Hours, 4½ Clinical Hours**

**Prerequisites:** ADN 101 Nursing Care During Life Cycle, ADN 203 Immobility Concepts, ADN 204 Regulatory Concepts, ADN 205 Psychological Concepts I, BIO 132 Human Biology II and BIO 150 Microbiology.

**ADN 208 Psychological Concepts II****2 Credits**

Continued application of the nursing process as it meets the needs of individuals experiencing psychological stress. Content includes psychiatric contents applied to behavioral changes. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

**1 Class Hour, 3 Laboratory Hours**

**Prerequisites:** ADN 101 Nursing Care During the Life Cycle, ADN 203 Immobility Concepts, ADN 204 Regulatory Concepts, ADN 205 Psychological Concepts I and BIO 132 Human Biology II.

**ADN 296 Nursing Seminar I****1 Credit**

Seminar discussions and role playing exercises explore, in detail, decision making, values clarification and the setting of priorities within the context of clinical nursing situations. Emphasis on clinical accountability and management of multiple patient care situations.

**2 Seminar Hours**

**Prerequisites:** Successful completion of all previous program requirements

**ADN 297 Nursing Seminar II****1 Credit**

A broad survey course examining the effects of a changing society upon the delivery of health care. Licensure and nursing practice issues. The National League for Nursing achievement tests used as a guide for the individuals' preparation for licensure.

**2 Seminar Hours**

**Prerequisites:** Successful completion of all previous program requirements

**ADN 298 Nursing Seminar III****0 Credits**

For those Nursing students who have transferred into the curriculum from other nursing programs, have passed the College's advanced-placement exam in nursing, or have not attended college for at least one year. Seminar discussions and role playing exercises designed to facilitate the student's adaptation to the role of the Associate Degree Nurse. Emphasis on problem solving, setting of priorities and utilization of the Nursing process in their daily activities.

**1 Class Hour****PARALEGAL ASSISTANT**

**All Paralegal Assistant courses are taught in the evening only.**

**\* PLA 110 Survey of Paralegalism****3 Credits**

Role of the paralegal and attorney. Introduction to jurisprudence and functions of administrative agencies. Local, state, federal courts. Introduction to contracts, torts, negligence, criminal procedure, real property law, law office management. Legal terminology.

**3 Class Hours****\* PLA 120 Advanced Paralegalism****3 Credits**

Continuation of law office management. Introduction to research techniques, family law, surrogate, wills and estates, agency and partnership, bankruptcy, corporate law, commercial paper, workman's compensation with procedures and practices of each. Legal terminology.

**3 Class Hours**

**Prerequisite:** PLA 110 Survey of Paralegalism

**\* PLA 200 Real Property Law****3 Credits**

Comprehensive survey of law of real property emphasizing practical application to a paralegal function. Analysis of forms of deeds, bonds, notes, mortgages, assignments, discharges, purchase of contracts, leases, options. Training in searching title, basic understanding of abstracts of title, real property litigation, estates, condemnation and foreclosure.

**3 Class Hours****\* PLA 205 Techniques of Research****3 Credits**

Development of research skills through the use of digests, encyclopedias, reporter systems and practice manuals. Arrangement, use and maintenance of a law library (including the Supreme Court Library). All legal references, for assistance in diverse phases of law and the operation of those agencies and institutions.

**3 Class Hours**

**Prerequisite:** PLA 110 Survey of Paralegalism or 2 years experience in a law office.

**\* PLA 210 Legal Drafting****3 Credits**

Analysis of legal documents for writing style, clarity of meaning, conciseness, various types of composition of formal and informal letter writing, memos, reports. Refinement of basic communication skills.

**3 Class Hours**

**Prerequisite:** ENG 110 Written Expression I and PLA 205 Techniques of Research

**\* PLA 215 Estates, Probates and Trusts****3 Credits**

Disposition of decedent's property, law of intestate succession, execution and probate of wills, nature and creation of trusts and the administration of estates and trusts, estate and gift tax preparation.

**3 Class Hours****\* PLA 220 Contracts****3 Credits**

The law of contracts, their historical significance, formation, validity, interpretation, transfer of contractual rights. Assignment, third party beneficiaries, discharge, breach and remedies. (BUS 118 Business Law I may be substituted).

**3 Class Hours****\* PLA 222 Medical Law****3 Credits**

General coverage of how legal and medical issues are inter-related, including right to treatment, organ transplant, right to die, abortion issues, medical malpractice, informed consent, insanity defense, surrogate mothers. Lecture and discussion. How these topics affect the role of the attorney and paralegal in servicing client needs.

**3 Class Hours**

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**

- \* PLA 225 Family Law 3 Credits**  
Pleadings relative to general practice of law in relationship to the family unit. Laws relating to marriage, divorce, annulment, custody and support, adoption, name change, guardianship, paternity. Written pleadings and necessary research pertaining to these aspects of family law  
**3 Class Hours**
- \* PLA 226 Taxation Law for Paralegals 3 Credits**  
Principles of federal taxation, analysis of IRS code and related case law, emphasis on law and concepts of taxation, basic and advanced tax law terminology, litigation involving the IRS. Exploration of social changes and factors involving tax problems, current issues in tax reform, perspective of the paralegal regarding resolution of tax disputes.  
**3 Class Hours**
- \* PLA 240 Corporate Law 1 Credit**  
Types, uses and organization of the corporation, antitrust and securities law, mergers and consolidation, liquidation and dissolution.  
**1 Class Hour**
- \* PLA 250 Municipal Law 1 Credit**  
Structure and operations of local government in New York State. Evolution of local government in New York during the first two centuries of its existence. Laws, ordinances and operations.  
**1 Class Hour**
- \* PLA 260 Labor-Management Relations (Labor Law) 1 Credit**  
Labor-management relations in the public and private sectors. Taft-Hartley Act, National Labor Relations Act and Wagner Act, unfair labor practices, labor contracts, arbitration and mediation, availability of injunctions in labor disputes.  
**1 Class Hour**
- \* PLA 270 Vehicle and Traffic Law 1 Credit**  
Regulations of traffic within the State of New York. Emphasis on violations and traffic-related misdemeanors resulting from violation of the rules of the road and court proceedings resulting therefrom.  
**1 Class Hour**
- \* PLA 280 Litigation and Trial Preparation 1 Credit**  
Intake procedures, systems and analysis, concepts of jurisdiction and venue, parties to an action, pleadings, pre-trial procedures, motions and special practice, special proceedings, trials, judgments and appeals.  
**1 Class Hour**
- \* PLA 290 Landlord-Tenant Relations 1 Credit**  
Problems faced by landlords and tenants, private housing, live-in arrangements, covenants, leases, warranties. Tenant and landlord rights and obligations.  
**1 Class Hour**
- \* PLA 299 Independent Study: Paralegal 1-3 Credits**  
An individual student project in paralegal studies which is beyond the scope or requirements of the courses offered by the program. Conducted under the direction of a faculty member or attorney, and approved by the program coordinator.  
**Prerequisites: PLA 110 Survey of Paralegalism plus three additional hours in a 200 level PLA course**

**\*TAUGHT EVENINGS ONLY AND WHEN ENROLLMENT PERMITS**

## PHILOSOPHY

- PHI 102 General Philosophy 3 Credits**  
Meaning of philosophy, suggestions for reading philosophy, informal logic, methodology and basic philosophical terms including idealism, dualism, naturalism.  
**3 Class Hours**
- PHI 103 Philosophy of Mind 3 Credits**  
Theories of major philosophers as to the nature and limits of human knowledge and the nature of reality. Problem of knowledge of the physical world, the mind-body problem, free-will problem, existentialist's view of man.  
**3 Class Hours**
- PHI 104 Philosophy of Religion 3 Credits**  
Relation of religion and philosophy and an investigation of different concepts of God. Analysis of religious types and experiences, different attempts to justify religious beliefs. Investigation of the logic of religious experience through an analysis of the leading ideas in the philosophy of religion both as an historical and contemporary phenomenon.  
**3 Class Hours**
- PHI 111 Humanities 3 Credits**  
Critical analysis of human development from the early beginnings to the present state through a thematic investigation of literature, philosophy, history and the arts. Classical, Medieval, Renaissance and Metaphysical Periods.  
**3 Class Hours**
- PHI 112 Humanities 3 Credits**  
Critical analysis of human development from the early beginnings to the present state through a thematic investigation of literature, philosophy, history and the arts. Neoclassical, Romantic, Victorian, Early Modern and Late Modern Periods.  
**3 Class Hours**
- PHI 113 Humanities I: Honors 4 Credits**  
A critical analysis of mankind's development from the early beginnings to the present through a thematic investigation of literature, philosophy, history and the arts. Classical, Medieval, Renaissance and Metaphysical Periods. For students in the Liberal Arts Honors Program, and others with permission.  
**4 Class Hours**
- PHI 114 Humanities II: Honors 4 Credits**  
A critical analysis of mankind's development from the early beginnings to the present state through a thematic investigation of literature, philosophy, history and the arts. Neo-classical, Romantic, Victorian, Early Modern and Late Modern Periods. For students in the Liberal Arts Honors Program, and others with permission.  
**4 Class Hours**
- PHI 120 Verbal Reasoning 3 Credits**  
To improve the student's ability in reasoning. Concentration on qualification, symbols, ambiguity, analysis and semantics. (Not offered in 1984-85 academic year).  
**3 Class Hours**
- PHI 201 Ethics: Moral Philosophy 3 Credits**  
Main classical and modern ethical theories, including such theorists as Plato, Aristotle, Spinoza, Mill, Kant, Moore, Toulmin, Ayer, Westermarck. Comparison and contrast of normative and meta-ethical theories, the good life and how one should act, the meaning of moral judgments and the criteria of validity, justification or moral beliefs and the grounds of moral responsibility.  
**3 Class Hours**



**PHI 202 Logic** **3 Credits**  
 Analysis and practical application of the elements of logic as they apply to thinking on both a linguistic and formal level. Forms of argument, informal and formal fallacies, significance of the emotions on decision making, inductive and deductive processes. Symbolizing arguments and formal proofs of validity.  
**3 Class Hours**  
**Prerequisite:** Any Philosophy (PHI) course or any Mathematics (MAT) course numbered MAT 139 or higher

**PHI 203 Philosophical Issues in American Education** **3 Credits**

Philosophy of selected American educators, with attention on the historical development of the American educational system. Brief review of educational outlooks from antiquity to the present, including Plato, Aristotle, Rousseau. Analysis of educational issues and of key terms in education from philosophical perspective. Nature of the individual, the school and society and the underlying philosophical interrelations that may exist.  
**3 Class Hours**

**PHI 206 Social and Political Philosophy** **3 Credits**  
 A philosophical study of the social/political organization of society through an examination of such topics as justice, authority, leadership, individual rights, and of the relationship between the state and various social institutions, such as family, business, church, and education.  
**3 Class Hours**

**PHI 299 Independent Study: Philosophy** **1-3 Credits**  
 An individual student project concerned with advanced work in a specific area of philosophy. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.  
**Prerequisite:** 3 semester hours of college level work in philosophy

## PHYSICAL EDUCATION

*Practically all of the Physical Education courses are half a semester in length. For the most part, the courses that take place outdoors are given in the first half of the fall semester or the second half of the spring semester; those courses that occur indoors are given in the second half of the fall semester or the first half of the spring semester.*

**NOTE**—Students taking Physical Education courses should have a Health Questionnaire on file with the college Health Service (Wales Building, Room 104). Forms are available in the Health Service upon request.

**PED 100 Archery** **½ Credit**  
 Fundamentals of shooting—seven-step approach. Proper target shooting technique and form stressed.  
**4 Class Hours, 11 Laboratory Hours per half semester**

**PED 103 Backpacking** **1 Credit**  
 A series of laboratories and lectures culminating in a four-day mandatory backpacking trip. Students learn to select, care for, and use properly the essential equipment, as well as some low cost alternatives to expensive items. The stress is on safety and low ecological impact camping.  
**15 Class Hours, 15 Laboratory hours per half semester**

**PED 106 Badminton** **½ Credit**  
 Instruction and practice in the various strokes. Rules, terminology and equipment. Strategy for singles and doubles.  
**4 Class Hours, 11 Laboratory Hours per half semester**

**PED 109 Basketball** **½ Credit**  
 Instruction and practice in the fundamental skills of passing, dribbling, shooting and defense. History, rules, and team play. Basketball as a carry-over sport. (Not offered in 1984-85 academic year).  
**4 Class Hours, 11 Laboratory Hours per half semester**

**PED 112 Bowling** **½ Credit**  
 Bowling fundamentals including ball selection, grip, stance, approach and delivery. Etiquette, scoring, correction of basic mistakes in delivery. Classes are at off-campus site and students must pay for own games, shoe rental and transportation.  
**3 Class Hours, 12 Laboratory Hours per half semester**

**PED 115 Physical Conditioning** **½ Credit**  
 A general physical conditioning class. Each student is pre-tested and then establishes his/her individual program. A selected battery of exercises (circuit) is utilized with some individual choice. (Formerly entitled Circuit Training and Conditioning).  
**3 Class Hours, 12 Laboratory Hours per half semester**

**PED 118 Field Hockey** **½ Credit**  
 Basic skills needed for good competition in game situations. Emphasis on rules and responsibilities of each position on the team. Organized competition within the class (Not offered in 1984-85 academic year).  
**4 Class Hours, 11 Laboratory Hours per half semester**

**PED 121 Golf** **½ Credit**  
 Skills, rules etiquette and strategy. Students required to play nine holes and hit at a driving range, providing their own transportation and fees. Clubs provided for those without.  
**4 Class Hours, 11 Laboratory Hours per half semester**

**PED 122 Horsemanship** **1 Credit**  
 Basics of grooming, saddling and safety procedures. Development and expansion of riding skills. Elementary knowledge of horses, their care and maintenance. Two options available: 1. English 2. Western. (Additional fee and taught off campus).  
**8 Class Hours, 20 Laboratory Hours per semester**

**PED 127 Jogging** **½ Credit**  
 Jogging as a possible leisure time activity. Physiological and psychological benefits, improvement of technique and basic principles of training. Individual works at own level and sets own goals. Distance usually worked: 2 miles.  
**3 Class Hours, 12 Laboratory Hours per semester**

**PED 130 Karate** **1 Credit**  
 Classical karate on the beginning and intermediate levels. Philosophy and brief history of karate. Basic katas (forms) together with pre-arranged sparring techniques. Free sparring with no body contact. Emphasis on physical conditioning and mental discipline.  
**8 Class Hours, 22 Laboratory Hours per semester**

**PED 132 Concepts in Physical Education** **2 Credits**  
 Emphasis on the basic knowledge, understanding and values of physical education. To help students make important decisions about their own personal fitness.  
**30 Class Hours per semester**

**PED 139 Self Defense** **½ Credit**  
 Brief explanation of karate, judo and other martial arts. Approximately 10 basic self-defense movements which, if properly acquired and practiced, can be applicable to many situations. Basic techniques of throwing, blocking, falling, punching and general body shifting motions. No definite dress required. A student should remember that exercises are meant to increase flexibility and endurance of muscles, and the dress should be a comfortable one for this purpose. Although this is not the formal karate class, the class will be conducted with formality and discipline.  
**3 Class Hours, 12 Laboratory Hours per semester**

**PED 142 Skiing****½ Credit**

Instruction and practice in all phases of skiing (beginning through advanced). Conduct, terminology, safety and equipment. Basic racing technique demonstrated and practiced where sufficient skill level and interest are indicated. Classes at an off-campus site; students must pay necessary fee and provide their own transportation.

**3 Class Hours, 12 Laboratory Hours per half semester**

**PED 143 Cross-Country Skiing****½ Credit**

Instruction and practice in cross-country skiing—beginning through advanced. Conduct, terminology, safety and equipment. Classes both on and off campus. Skis, poles, bindings provided; students responsible for boots and transportation. (Formerly entitled Ski Touring).

**3 Class Hours, 12 Laboratory Hours per half semester**

**PED 145 Aerobics****½ Credit**

Movement and exercise done with music to achieve cardiovascular fitness, improve muscle tone, develop body awareness, increase energy and help one to feel good about oneself.

**4 Class Hours, 11 Laboratory Hours per half semester**

**PED 147 Soccer (Women)****½ Credit****PED 148 Soccer (Men)****½ Credit**

Instruction and practice in the fundamental skills of kicking, tackling, trapping, dribbling and heading. Rules and tactics. Team competition. Separate sections for men and women.

**4 Class Hours, 11 Laboratory Hours per half semester**

**PED 154 Speedball****½ Credit**

A combination team sport involving skills common to soccer, basketball and football. Development of skills, rules and strategy of the game. Speedball is a fast moving, quick thinking game. (Not offered in 1984-85 academic year).

**4 Class Hours, 11 Laboratory Hours per half semester**

**PED 169 Tennis****½ Credit**

Instruction and practice in the basic strokes—forehand, backhand, serve and volley. Rules, terminology and equipment. Strategy for singles and doubles.

**4 Class Hours, 11 Laboratory Hours per half semester**

**PED 170 Trail Riding****½ Credit**

Basics of grooming, saddling and safety procedures. Development and expansion of riding skills—learning to cope with natural hazards like creeks, traffic, terrain. Elementary knowledge or horses, their care and maintenance. (Taught off campus and an additional fee is required).

**4 Class Hours, 11 Laboratory Hours per half semester**

**PED 172 Volleyball****½ Credit**

A basic course in the fundamentals of power volleyball. Team strategy, history and rules. Drills and competitive play.

**4 Class Hours, 11 Laboratory Hours per half semester**

**PED 175 Weight Training****½ Credit**

Individualized work on weight machine. Student selects activities along with instructor's guidance. Emphasis on improvement of weaknesses and a balanced approach. Physical fitness, principles of training. (Not offered in 1984-85 academic year).

**3 Class Hours, 12 Laboratory Hours per half semester**

**PED 299 Independent Study****½ or 1 Credit**

Student undertakes a project of own choice with guidance from faculty member. The project is intended for a student who has completed requirements.

**Prerequisite: 2 Semester Hours in Physical Education**

**PHYSICAL SCIENCE****PHS 111 Physical Science for Today****3 Credits**

Beginnings of astronomy, the earth and moon, planets and satellites, the sun and other stars, cosmology. Chemistry of our atmosphere, weather and methods of modification, water cycle and pollution. Composition of the earth's crust erosional processes, earthquakes and volcanoes, plate tectonics, nuclear radiation, man and his environment. Required field trips supplement classroom experience.

**2 Class Hours, 2 Laboratory Hours**

**PHS 113 Physical Science—Astronomy****4 Credits**

The Copernican and Ptolemaic models of the solar system. The planets, sun, moon and comets. Stellar magnitudes and evolution of stars. The size and age of the universe and modern developments in astronomy and cosmology. Required field trips supplement classroom experience.

**3 Class Hours, 3 Laboratory Hours**

**Prerequisite: MAT 003B and C Basic Mathematics Review or equivalent**

**PHS 114 Physical Science—Meteorology****4 Credits**

The atmosphere—composition, circulation, energy transfer, observations and instrumentation used. Weather phenomena—air masses, weather patterns, severe weather and optics. Forecasting through observations and plotting. Introduction to climatology, the control and classification of climates based upon principles of meteorology. Required field trips supplement classroom experience.

**3 Class Hours, 3 Laboratory Hours**

**Prerequisite: MAT 003B and C Basic Mathematics Review or equivalent**

**PHS 115 Physical Science—Geology****4 Credits**

Crystals, minerals, rocks—their structure and identification. Erosion of the crust, its uplift and deformation. Earthquakes and the interior of the earth, geologic dating and the physical history of the earth. Plate tectonics and continental drift, ecology from a geologic viewpoint. Required field trips supplement classroom experience.

**3 Class Hours, 3 Laboratory Hours**

**Prerequisite: MAT 003B and C Basic Mathematics Review or equivalent**

**PHS 116 Physical Science—Energy & Environment****4 Credits**

Basic physical principles and the role of these principles in understanding and appreciating the problems of the environment. Problems of pollution and depletion of natural resources. Application of physics in the everyday world. Required field trips supplement classroom experience.

**3 Class Hours, 3 Laboratory Hours**

**Prerequisite: MAT 003B and C Basic Mathematics Review or equivalent**

**PHYSICS****PHY 100, 101 Preparatory Physics I and II****4, 4 Credits**

Composition and resolution of vectors. Statics and dynamics. Conservation laws, wave motion, sound and light. Thermodynamics, electricity and magnetism. The physics of the atom.

**4 Class Hours each**

**Prerequisite: MAT 003B and C Basic Mathematics Review or equivalent**

**PHY 117 Physics****3 Credits**

Vectors, linear motion, energy, momentum, electric fields, potential difference, Ohm's law, d-c circuits, motion of charges in magnetic fields, electromagnetic induction. Mirrors and lenses, nature of light, atomic structure, production of X-rays, radioactive decay, nuclear reactions, interaction of radiation with matter, radiation detection, radiation protection standards.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisite: MAT 003B and C Basic Mathematics Review or equivalent**



**PHY 141 Physics**

Composition and resolution of vectors, forces in equilibrium, moments of forces, elasticity, linear and projectile motion, forces and motion, rotation, work and energy, impulse and momentum, harmonic motion, fluid mechanics, temperature, thermal expansion, heat. For Engineering Technology students.

**3 Class Hours, 2 Laboratory Hours**

**Corequisite:** MAT 141 Algebra and Trigonometry or equivalent

**PHY 142 Physics****4 Credits**

Thermodynamics, thermal properties of gases, wave motion and sound, electrostatics, direct current, magnetism, electromagnetic induction, alternating current, electromagnetic radiation, illumination, reflection and refraction of light, mirrors and lenses, optical instruments, diffraction, nuclear energy. For Engineering Technology students.

**3 Class Hours, 2 Laboratory Hours**

**Prerequisite:** PHY 141 Physics

**PHY 144 Physics II-E****4 Credits**

Thermodynamics, wave motion and sound, photometry, reflection, refraction, dispersion, light, mirrors and lenses, optical instruments, diffraction, lasers, electrostatics, potential, current, resistance, magnetism, semiconductor theory. For Electrical Technology students.

**3 Class Hours, 2 Laboratory Hours**

**Prerequisite:** PHY 141 Physics, EET 121 Electrical Circuits

**PHY 161 Physics****4 Credits**

Structure and language of physics. Standard units of measurement of length, mass and time. Basic mathematical foundation: elementary trigonometry, vector algebra, powers of ten and significant figures. Mechanics: motion, Newton's Laws, work, energy and momentum principles, rotation. Waves and wave phenomena, mirrors and lenses, optical instruments, sound. First course in an introductory non-calculus sequence. For Liberal Arts students who need a laboratory science.

**3 Class Hours, 3 Laboratory Hours**

**Prerequisite:** MAT 141 Algebra and Trigonometry or equivalent

**PHY 162 Physics****4 Credits**

Concepts of heat and temperature, kinetic theory, thermodynamics. Electricity and magnetism: electrostatics, electrical circuits, electromagnetic phenomena. Modern physics: relativity, quantum theory, atomic structure radioactivity. Second half of introductory physics course for Liberal Arts students who need a laboratory science.

**3 Class Hours, 3 Laboratory Hours**

**Prerequisite:** PHY 161 Physics

**PHY 181 Engineering Physics I****4 Credits**

Vectors, equilibrium, kinematics, Newton's Laws of Motion, centripetal force, work and energy, impulse and momentum, rotation, elasticity, harmonic motion, hydrostatics and hydrodynamics.

**3 Class Hours, 2 Laboratory Hours**

**Corequisite:** MAT 163 Calculus with Analytic Geometry I or MAT 171 Engineering Calculus with Analytic Geometry I and EGR 100 Orientation

**PHY 182 Engineering Physics II****4 Credits**

Relativistic mechanics, Coulomb's Law, electrostatic field, potential, capacitance, direct currents, magnetic force on currents, magnetic field of a current, induced emf, inductance, alternating currents.

**3 Class Hours, 2 Laboratory Hours**

**Prerequisite:** PHY 181 Engineering Physics I

**Corequisite:** MAT 164 Calculus with Analytic Geometry II or MAT 172 Engineering Calculus with Analytic Geometry II and EGR 100 Orientation

**PHY 281 Engineering Physics III****4 Credits**

Temperature, heat transfer, thermodynamics, kinetic theory, waves, sound, geometrical and physical optics, introduction to quantum physics, atomic and nuclear physics.

**4 Class Hours**

**Prerequisites:** 1 year of calculus and PHY 182 Engineering Physics II or equivalent

**Corequisite:** EGR 100 Orientation

**PROBABILITY AND STATISTICS****POS 201 Introduction to American Government****3 Credits**

American political institutions, processes and behavior. The relationships among cultural, legal and social aspects of the political system. Structure, organization and function of political parties, pressure groups and mass media. Application to contemporary issues and events.

**3 Class Hours**

**POS 203 International Relations****3 Credits**

Basic concepts and principles of world politics. International conflict resolution, international organizations, the struggle for power. Factors affecting the relationships among the major powers. Role of diplomacy, alliances, war and peace in the world arena. (Not offered during 1984-85 academic year).

**3 Class Hours**

**POS 204 American State and Local Government****3 Credits**

Theory and practice of state and local government, utilizing a problem-solving or "policy" approach. Students are encouraged to explore in depth the workings of city and county governments locally.

**3 Class Hours**

**POS 299 Independent Study****1-3 Credits**

An independent student project which is beyond the scope of courses currently offered by the department, directed by a faculty member with approval of the department chairperson.

**Prerequisite:** 3 semester hours of political science

**PSYCHOLOGY****PSY 100 Psychology of Personal Adjustment****3 Credits**

Investigation of bio-cultural factors which influence human behavior and study of the development of well-adjusted personality. Attention is directed to the learning and thinking the individual employs in solving personal problems in everyday living. (This course cannot be used as a prerequisite for other psychology courses.)

**3 Class Hours**

**PSY 103 Psychology of Adulthood****3 Credits**

Investigation of the continuity-change pattern that characterizes normal adulthood (20 to 60 years). Identification of individual responses to life crises. Introduction to skills that facilitate meeting self-selected goals and skills that assist others to fulfill their goals.

**3 Class Hours**

**PSY 110 General Psychology****3 Credits**

Definition and description of psychology. Functions of the neural system, sensation and perception, learning, memory, motivation, emotion, conflict and frustration, personality, social psychology. Methods and statistical applications, history and fields of psychology.

**3 Class Hours**

**PSY 150 to 200 Special Topics in Psychology****1 Credit**

Topics of interest to a (class size) group will be explored. Prospective students should make their request at least three weeks before the end of the preceding semester. Possible topics, for example, could include stress management or child rearing styles.

**PSY 211 Child Development****3 Credits**

The growth, maturation and development of children, including mental and motor phases, learning, motivation and personality formation.

**3 Class Hours****Prerequisite:** PSY 110 General Psychology**PSY 212 Adolescent Development****3 Credits**

The developmental tasks of the adolescent years. Influence of people and institutions on self-concept. Physical, psychological, intellectual effects and intellectual growth.

**3 Class Hours****Prerequisite:** PSY 110 General Psychology**PSY 214 Abnormal Psychology****3 Credits**

Description and criteria for normal and abnormal personality. Dynamic processes of adjustment, the coping process. Definition and description of sociopathic, psychopathic, neurotic and psychotic behavior. Development of both functional and organic disorders.

**3 Class Hours****Prerequisite:** PSY 110 General Psychology**PSY 217 Counseling and Interviewing****3 Credits**

Varied methods of interviewing and counseling, group dynamics employing current theories, situational examples and means for determination of method to be used. Practical cases in social services, clinics, hospitals and educational institutions. Overall training and personality of the counselor.

**3 Class Hours****Prerequisite:** PSY 110 General Psychology**PSY 223 Intelligence and the Mentally Retarded****3 Credits**

The several meanings of the concept of intelligence, distribution of intelligence in populations, development and organization of intelligence at different levels, concepts of retardation. The various levels and causations of retardation, development at all chronological ages, learning and employment expectations, methods of assisting with behavioral improvement, cooperative social agencies.

**3 Class Hours****Prerequisite:** PSY 110 General Psychology**PSY 227 Behavior Modification****3 Credits**

Principles of behavior modification using classical and operant techniques. Practical applications of these principles to the fields of childcare, psychotherapy and correctional institutions.

**3 Class Hours****Prerequisite:** PSY 110 General Psychology**PSY 299 Independent Study****1-3 Credits**

An individual student project in psychology which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.

**Prerequisite:** PSY 110 General Psychology plus 3 additional hours in a 200 level PSY course

**RADIOLOGIC TECHNOLOGY****RAD 100 Introduction to Radiologic Technology****2 Credits**

**Part I** Overview of radiologic technology through the study of its historical development, its placement in the medical field today, the organization of a modern radiology department, professional ethics, and medicolegal aspects of radiology.

**Part II** Introduction and orientation to the radiology department in an affiliated hospital.

**First half semester, 2 Class Hours****Second half semester, 16 Laboratory Hours****RAD 101 Radiologic Technology I****3 Credits**

Introduction to the basic principles of radiographic imaging including recording media, processing methods, radiographic quality and radiographic accessories. Lecture and laboratory are coordinated to enhance these fundamental concepts.

**3 Class Hours, 1 Laboratory Hour****REA 102 Radiologic Technology II****3 Credits**

Advanced study of the factors contributing to the radiographic image.

**3 Class Hours****Prerequisite:** RAD 101 Radiologic Technology I or permission of instructor**RAD 103 Positioning I****1 Credit**

Instruction and practice in radiographic positioning of the appendicular skeleton.

**3 Laboratory Hours****RAD 104 Positioning II****1 Credit**

Instruction and practice in radiographic positioning of the axial skeleton.

**3 Laboratory Hours****Prerequisite:** RAD 131 Clinical Education I**RAD 110 Methods of Patient Care****2 Credits**

Patient care procedures routinely performed in the radiology department. Basic medical terminology for the student radiographer.

**2 Class Hours, 1 Laboratory Hour****RAD 115 Radiation Protection****1 Credit**

Interaction of radiation with living organisms, particularly as related to man. Emphasizes basic radiation protection, its philosophy and rules governing the application of ionizing radiation on humans.

**1 Class Hour****RAD 131 Clinical Education I (Winterim)**

Clinical assignment devoted to observation and application of elementary radiographic procedures under direct supervision in a cooperating hospital. (Successful achievement is a graduation requirement).

**2 Weeks of Instruction**

**Prerequisites:** BIO 131 Human Biology I and RAD 100 Introduction to Radiologic Technology and RAD 110 Methods of Patient Care or permission of instructor.

**RAD 132 Clinical Education II****2 Credits**

Observation and clinical experience for the development of competency involving elementary radiographic procedures in an affiliated hospital.

**16 Laboratory Hours****Prerequisite:** RAD 131 Clinical Education I (Winterim) or permission of instructor**RAD 133 Clinical Education III (Summer Term I)****3 Credits**

Clinical experience for development of competency involving general radiographic procedures in an affiliated hospital.

**40 Laboratory Hours**

**Prerequisite:** RAD 132 Clinical Education II and BIO 132 Human Biology II or permission of instructor



**RAD 203 Positioning III** **1 Credit**  
Laboratory instruction and practice in positioning techniques involving the skull and facial bones.  
**3 Laboratory Hours**  
**Prerequisite:** RAD 133 Clinical Education III or permission of instructor

**RAD 210 Radiologic Physics** **4 Credits**  
Physics of radiographic equipment, including fundamental electronics, X-ray production, the X-ray tube and related circuitry, and preventive maintenance.  
**4 Class Hours**  
**Prerequisite:** PHY 117 Physics or permission of instructor

**RAD 216 Imaging Modalities** **1 Credit**  
Introduction to the principles of computerized axial tomography, nuclear medicine and ultrasound.  
**1 Class Hour**  
**Prerequisite:** RAD 210 Radiologic Physics or permission of instructor

**RAD 220 Radiologic Pathology** **2 Credits**  
A presentation of the various medical and surgical diseases and their relationship to radiographic procedures.  
**2 Class Hours**  
**Prerequisite:** BIO 132 Human Biology II or permission of instructor

**RAD 225 Special Radiographic Procedures** **4 Credits**  
Introduction to radiographic examinations involving surgical procedures and specialized equipment.  
**3 Class Hours, 2 Laboratory Hours**  
**Prerequisite:** RAD 230 Clinical Education IV or permission of instructor

**RAD 230 Clinical Education IV** **2 Credits**  
Practical application of advanced positioning techniques with emphasis on the skull and facial bones.  
**16 Laboratory Hours**  
**Prerequisite:** RAD 133 Clinical Education III (Summer) or permission of instructor

**RAD 231 Clinical Education V (Winterim II)**  
Clinical assignment devoted to the application of radiographic procedures under direct supervision in a cooperating hospital. (Successful achievement is a graduation requirement.)  
**2 Weeks of Instruction**  
**Prerequisite:** RAD 230 Clinical Education IV or permission of instructor

**RAD 232 Clinical Education VI** **2 Credits**  
Practical application of advanced radiographic procedures under direct supervision in an affiliated hospital.  
**16 Laboratory Hours**  
**Prerequisite:** RAD 231 Clinical Education V (Winterim) or permission of instructor

**RAD 233 Clinical Education VII** **3 Credits**  
Clinical experience for the development of competency.  
**40 Laboratory Hours**

**RAD 245 Radiobiology** **2 Credits**  
Radiobiology and advanced radiation protection procedures related to diagnostic and therapeutic uses of radiation.  
**2 Class Hours**  
**Prerequisite:** RAD 210 Radiologic Physics or permission of instructor

**RAD 250 Image Assessment** **2 Credits**  
The basic principles and techniques of quality assurance testing presented and illustrated through laboratory experiments. Major emphasis on the tests and measurements used to analyze imaging systems with minimum information loss.  
**2 Class Hours, 1 Laboratory Hour**  
**Prerequisite:** RAD 210 Radiologic Physics or permission of instructor

**RAD 295 Seminar in Radiography** **2 Credits**  
Preparation of the technical report and its organization for both written and oral presentation. Readings in current literature and journals.  
**2 Class Hours**  
**Prerequisite:** Senior Year Status

## READING AND LEARNING SKILLS

**RDG 090 Reading Fundamentals** **0 Credit**  
A non-credit course involving individual diagnosis of a student's reading strengths and weaknesses, and development and implementation of a program to upgrade basic skills. Content to vary with individual student.  
**2 Class Hours, 2 Laboratory Hours**

**RDG 100 College Reading** **0 Credit**  
An individualized course emphasizing vocabulary expansion, inferential and critical comprehension, and flexible rate. Instruction and practice in the application of reading skills to specific content areas. (Non-credit course).  
**2 Class Hours, 2 Laboratory Hours**

**RDG 110 Rapid Reading** **1 Credit**  
Development of skills characteristic of the mature reader. Examination of structure of material, emphasis on identification of purpose, flexibility of rate. Use of controlled readers, reading accelerators.  
**2 Class Hours**

The following courses are limited-credit activities for students wishing to enhance various study skills:

**LRS 101 Study Management** **½ Credit**  
General principles of academic success, relationship of outside work and study, scheduling and organizing time, study and concentration. Students will construct a working study schedule.  
**3 Class Hours, 3 Weeks**

**LRS 102 Memory and Exams** **½ Credit**  
Theories of memory. Methods of review, strategies for taking essay and objective examinations.  
**3 Class Hours, 3 Weeks**

**LRS 103 Textbook Mastery** **½ Credit**  
Use of college textbooks as study aids, principles of effective text reading, text study systems. Extensive application of these principles in the student's own textbook.  
**3 Class Hours, 3 Weeks**

**LRS 104 Listening and Notetaking** **½ Credit**  
Examination of organizational patterns as they exist in oral communication. Exploration of systems on note-taking, and application of systems to student's own lectures and notes.  
**3 Class Hours, 3 Weeks**

**LRS 110 The Research Paper** **1 Credit**  
Shaping the paper: development of a topic, location of appropriate resources and digestion of the material. Writing the paper: outlining, effective composition and proper form. A hands-on approach in which students actually research a topic and compose a term paper.  
**2 Class Hours for 8 Weeks**

**LRS 120 The Art of Thinking****1 Credit**

Logic as an art. Logical principles taught in imaginative ways to achieve understanding. Emphasis on the practice of reasoning. Fundamental logical rules are taught as tools to enable the students to gain experience and confidence in thinking about issues that are important to them.

**2 Class Hours for 8 Weeks**

**OFFICE TECHNOLOGIES**

**Note**—SEC 101A, 101B and 101C Typewriting (below) were formerly combined in SEC 101 Typewriting, which is no longer offered.

**SEC 101A Typewriting****1 Credit**

Introduction to the electric typewriter keyboard and machine operations. Development of basic skill building in typing exact copy by touch for 3 minutes with a maximum of 3 errors.

**2 Class Hours, 3 Laboratory Hours, 5-Week Course**

**Prerequisite:** For international students, English as a Second Language or permission of instructor

**SEC 101B Typewriting****1 Credit**

Continuation of skill building with emphasis on pacing and rhythm drills. Development of speed and accuracy in typing exact copy by touch for 5 minutes with a maximum of 5 errors.

**2 Class Hours, 3 Laboratory Hours, 5-Week Course**

**Prerequisite:** SEC 101A Typewriting or equivalent

**SEC 101C Typewriting****1 Credit**

Development of basic techniques in preparing typewritten letters, horizontal and vertical centering exercises, memorandums, tabulations, outlines, manuscripts.

**2 Class Hours, 3 Laboratory Hours, 5-Week Course**

**Prerequisite:** SEC 101B Typewriting or equivalent

**Note**—SEC 102A, 102B and 102C Typewriting (below) were formerly combined in SEC 102 Typewriting, which is no longer offered.

**SEC 102A Typewriting****1 Credit**

Advanced skill building with emphasis on pacing and rhythm drills. Development of speed and accuracy in typing exact copy by touch for 5 minutes with a maximum of 5 errors.

**2 Class Hours, 3 Laboratory Hours, 5-Week Course**

**Prerequisite:** SEC 101C Typewriting, ability to type without looking at keys and a 5-minute timing at 41 net words per minute with 5-error maximum

**SEC 102B Typewriting****1 Credit**

Development of advanced techniques in typing different styles of business letters, manuscripts, memorandums.

**2 Class Hours, 3 Laboratory Hours, 5-Week Course**

**Prerequisite:** SEC 102A Typewriting or equivalent

**SEC 102C Typewriting****1 Credit**

Development of advanced techniques in typing different styles of tabulations, financial statements, business forms, employment application data.

**2 Class Hours, 3 Laboratory Hours, 5-Week Course**

**Prerequisite:** SEC 102A Typewriting or equivalent

**SEC 109 Basic Transcription****3 Credits**

Designed to improve understanding of basic sentence structure, grammar, business vocabulary and punctuation as related to the business world. Practical application through exercises at the typewriter on rough draft copy.

**3 Class Hours**

**Prerequisite:** SEC 101 A, B or equivalent or concurrent enrollment in SEC 101 A, B

**SEC 110 Shorthand****3 Credits**

Beginning course in Gregg Shorthand, Series 90 System. Basic principles to promote the ability to read fluently from plates and notes. Longhand and typewritten transcription from shorthand notes dictated from unfamiliar material at minimum rate of 60 words a minute.

**2 Class Hours, 3 Laboratory Hours**

**Prerequisite:** SEC 101 A, B and C Typewriting or equivalent or concurrent enrollment in SEC 101 A, B and C Typewriting

**SEC 111 Shorthand and Transcription****3 Credits**

Development of a minimum rate of 70 words per minute shorthand speed, dictated from unfamiliar material, with efficient transcription techniques to produce typewritten mailable transcripts. Emphasis on shorthand speed building while integrating the correct usage of principles of grammar, spelling, punctuation, capitalization, vocabulary, numbers, word division, words often confused.

**2 Class Hours, 3 Laboratory Hours**

**Prerequisites:** SEC 110 Shorthand or equivalent and SEC 101 A, B and C Typewriting or equivalent and SEC 109 Basic Transcription or concurrent enrollment

**SEC 130 Freshman Orientation****1/2 Credit**

Introduction to the College and departmental policies and procedures. Discussions pertaining to the Department of Office Technologies options and career paths. A review of the College's services available for students.

**1 Class Hour Bi-weekly**

**SEC 151 Business Communications****3 Credits**

Development of desirable written communication style. Review of basic writing mechanics. Composition of letters of inquiry and reply, claim and adjustment, credit and collection, sales and promotion, application. Memorandums, news releases, short reports, telegrams.

**3 Class Hours**

**Prerequisite:** SEC 101 A, B and C Typewriting or equivalent and SEC 109 Basic Transcription

**SEC 211 Advanced Typewriting****3 Credits**

Training in advanced typewriting techniques. Emphasis on preparing documents for law, insurance, real estate, banking and technical fields. Continuation of speed building.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisites:** SEC 102 A, B and C Typewriting

**SEC 230 Advanced Shorthand****3 Credits**

Emphasis on increasing shorthand speeds and improving production of mailable typewritten transcripts through an increased knowledge of basic information and vocabulary from such topics as finance, law, information processing and environmental sciences. Transcription at the typewriter from notes dictated from unfamiliar material at a minimum of 80 words per minute.

**2 Class Hours, 3 Laboratory Hours**

**Prerequisites:** SEC 111 Shorthand and Transcription and SEC 102 A, B, C Typewriting

**SEC 235 Machine Transcription****1 Credit**

Practical experience in the use of transcribing equipment. Students are expected to apply correct usage of principles of grammar, punctuation and spelling, as well as develop increasing skill in transcribing business communications.

**1 Class Hour, 4 Laboratory Hours, 5-Week Course**

**Prerequisites:** SEC 111 Shorthand and Transcription and SEC 102 A, B, C Typewriting



**SEC 236 Machine Transcription** **3 Credits**  
Emphasis on increasing skill in transcribing recorded materials. Continuing development of knowledge of business vocabulary, correct usage of principles of grammar, punctuation, spelling in the machine transcription of business documents.  
**2 Class Hours, 2 Laboratory Hours**  
**Prerequisites:** SEC 102 A and B Typewriting and SEC 151 Business Communications

**SEC 237 Text Editing I** **1 Credit**  
An opportunity to develop basic word processing skills. Students create, edit, print and file documents. Hands-on experience as well as theory applied to machine operations.  
**1 Class Hour, 4 Laboratory Hours, 5-Week Course**  
**Prerequisite:** SEC 102 A, B, C Typewriting

**SEC 238 Text Editing II** **1 Credit**  
A continuation of SEC 237 Text Editing I. Students develop additional text editing skills while learning advanced functions, such as adjusting page lengths, moving text, advanced formatting functions, printing documents while typewriting, creating dual columns, merging documents. The refinement of these skills to be ascertained as students produce documents and complete relevant projects.  
**1 Class Hour, 4 Laboratory Hours, 5-Week Course**  
**Prerequisite:** SEC 237 Text Editing I

**SEC 239 Text Editing III** **1 Credit**  
A refinement of text editing skills for the word processing major. Students should learn document management and security, loop operations, equations, list processing and the calculator mode. Students should develop input/output text editing skills associated with all previously acquired machine functions. They will create, edit and revise complicated documents including manuscripts and statistical reports and tables.  
**1 Class Hour, 4 Laboratory Hours, 5-Week Course**  
**Prerequisite:** SEC 238 Text Editing II

**SEC 241 Word Processing Concepts** **3 Credits**  
A study of terminology, concepts and procedures utilized in producing written communications at top speed, with the greatest accuracy, the best effort, and the lowest cost. Students to develop an understanding of current office procedures in organizing and implementing a word processing/administrative support operation.  
**3 Class Hours**  
**Prerequisites:** SEC 102 A, B, C Typewriting and SEC 151 Business Communications

**SEC 242 Office Procedures** **3 Credits**  
Final preparation for an office career. Business activities related to word processing, postal and shipping services, telephone procedures, travel arrangements, planning meetings, banking services, application of filing procedures.  
**3 Class Hours**  
**Prerequisites:** For Office Services Assistant students—Concurrent enrollment in SEC 236 Machine Transcription. For Executive Secretarial students—SEC 230 Advanced Shorthand or concurrent enrollment in SEC 230.

**SEC 243 Records Management** **1 Credit**  
A study of classification systems including alphabetic, subject, numeric, and geographic methods. In addition, students study the development of information management programs including the record management process, procedures for controlling information, and micrographic and automation processes.  
**3 Class Hours, 5-Week Course**

**SEC 246 Office Machines** **3 Credits**  
Practical experience in the operation of various typewriters including magnetic keyboard equipment, calculators, mimeo and spirit duplicators, transcribing and dictating equipment.  
**2 Class Hours, 3 Laboratory Hours**  
**Prerequisites:** SEC 109 Basic Transcription and SEC 101 A and B Typewriting and/or concurrent enrollment in SEC 101 C Typewriting.  
**Corequisite:** SEC 248 General Office Procedures

**SEC 248 General Office Procedures** **3 Credits**  
Analysis of the basic tasks performed by the office employee. How to apply for and secure the office position. Filing systems and procedures, telephone and telegram services, postal information, office supplies and equipment.  
**3 Class Hours**  
**Prerequisites:** SEC 109 Basic Transcription and SEC 101 A and B Typewriting and/or concurrent enrollment in SEC 101 C Typewriting.  
**Corequisite:** SEC 246 Office Machines

**SEC 250 Office Administration** **3 Credits**  
A study of the problems and scope of management in general. Students given a thorough understanding of operative management. Students should understand the need to simplify, coordinate, and mechanize office operations. An understanding of the objectives, policies and procedures of specific departments are studied.  
**3 Class Hours**  
**Prerequisite:** This is a capstone course and must be taken during the student's final semester.

**SEC 260 Directed Secretarial Experience—Model Office** **2 Credits**  
Secretarial students are required to work at least four hours weekly in the model office to gain practical working knowledge by producing various types of campus communications.  
**4 Laboratory Hours**  
**Prerequisites:** For Executive Secretarial Students—SEC 238 Text Editing II and concurrent enrollment in SEC 230 Advanced Shorthand. For Office Services Assistant and Word Processing Students—SEC 238 Text Editing II and concurrent enrollment in SEC 236 Machine Transcription.

**SEC 261 Extended Secretarial Experience—Model Office** **2 Credits**  
Continuation of SEC 260 Directed Secretarial Experience—Model Office, with emphasis on advanced word processing training and professional development. Students are required to assume more demanding and sophisticated responsibilities than in SEC 260.  
**4 Laboratory Hours**  
**Prerequisite:** SEC 260 Directed Secretarial Experience—Model Office

**SEC 299 Independent Study** **1-4 Credits**  
Advanced investigation or research in an individual student's major field of study. Under the guidance of a faculty member, the independent study concerns material beyond the scope and depth of the ordinary course offering. Only one independent study course is allowed per semester.  
**Prerequisite:** Approval of faculty member and department chairperson

## SIGN LANGUAGE

**\* HUS 120 Sign Language** **3 Credits**  
Introduction to total communication as a means of conversing with the deaf. American Sign Language, finger-spelling, numbers, idioms, non-verbal communication, singing songs, poems, stories, psychology of the deaf.  
**3 Class Hours**

**HUS 220 Intermediate Sign Language I** **3 Credits**  
Conversational Sign Language: American Sign Language with English translations. ASL based upon general topics of interest in every day life.  
**3 Class Hours**  
**Prerequisite:** HUS 120 Sign Language

### **HUS 230 Intermediate Sign Language II**

**3 Credits**

Introduction to interpreting: Intensive review of ASL with English translations. Emphasis on non-verbal communications. Extensive use of audio cassettes to increase students' sign fluency.

**3 Class Hours**

**Prerequisite:** HUS 121, 220 or permission of instructor

## **SOCIAL SCIENCE (INTERDISCIPLINARY)**

### **SOS 120 Science Technology and Society**

**3 Credits**

A study of the interaction of the forces of science and technology with contemporary society, such as government, industry, family, education and organized religion. In addition, students examine the major views (utopian optimist vs. dystopian pessimist) on our contemporary scientific technology. Examine such current topics as recombinant DNA research, space colonization, artificial intelligence, computers.

**3 Class Hours**

### **SOS 125 Global Security or Nuclear Armageddon: Nuclear Weapons and the Prospects for Human Survival**

**3 Credits**

Short history of the development of nuclear weapons and the first atomic war. Actual and theoretical effects of nuclear weapons on human beings, organized societies and the environment. Threat of nuclear war in the immediate future, efforts at nuclear arms control and nuclear disarmament, possible security alternatives to nuclear weapons.

**3 Class Hours**

### **SOS 130 Man, Technology and Environment**

**3 Credits**

Biological, economic and political dimensions of the environmental crisis. The conditions created by population growth, a rising standard of living, the increased demand on natural resources, and the advance of technology. Alternative strategies to deal with pollution and energy problems.

**3 Class Hours**

### **SOS 146 Introduction to Gerontology**

**3 Credits**

Multidisciplinary analysis of the bio-psycho-social characteristics of older persons. Examination of major issues and dynamics involved in the process of growing old.

**3 Class Hours**

**Prerequisite:** PSY 110 General Psychology or permission of instructor.

### **SOS 150 Introduction to Human Service Work**

**6 Credits†**

Treatment modalities, goal planning, facility usage, counseling, helping skills, principles of human development, etiology, normalization, detection. Institutionalization effects, empathy training, evaluation, problem solving, transactional skills, theoretical systems, ethical issues. Psychoactive drugs, rehabilitative and rehabilitative programs, community services.

† Credit available only to those who complete successfully a certified institution-based training program and credit is only applicable toward the Associate in Science degree in the Liberal Arts Division's Mental Health and Retardation Emphasis. Credit cannot be used to fulfill other social science requirements.

### **SOS 160-169 Case Studies in Ethnicity**

A sociological analysis of the origins and experiences, the cultural patterns and social relationships of Americans from various ethnic backgrounds.

### **SOS 160 The Italian American**

**1 Credit**

Deals with Italian Americans as an initial attempt to focus attention on ethnic groups and their persistent impact.

**1 Class Hour**

### **SOS 170-179 Contemporary Cultures**

Studies in comparative cultures featuring social, political, economic, literary/artistic detail. The United States and at least one foreign culture compared and contrasted as a means of gaining insight into and understanding both.

### **SOS 170 United States and the Mideast**

**3 Credits**

Examination of the cultural and political dimensions which underlie current U.S.-Middle East relations and conflicts both internal and external to the region. Historical perspective on comparative cultures and value systems. Political and cultural differences. Energy security, strategic importance to the U.S., and Arab-Israeli conflict, the Gulf states, Egypt, Turkey, Iran.

**3 Class Hours**

### **SOS 220 Post-Industrial Civilization:**

#### **Honors Seminar**

**4 Credits**

Study of the planet as an interdependent unit facing the challenge of survival with hemispheric differences between "post-industrialized" and "non-industrialized" societies. Interconnections between economic, political, social systems with varying values and traditions. Major works in studies of the future examined for possible answers to such basic survival questions as problems of population, production and distribution of food, energy and other essential resources, ultimate difficulties of pollution and waste disposal.

**4 Class Hours**

### **SOS 275 Honors Internship Seminar**

**3 Credits**

Opportunity for Liberal Arts honors students to have a work experience in the professional field in which they plan to major, as they intern in Broome County Governmental or non-profit human services agencies.

**1 Class Hour, 8 Practicum Hours**

### **SOS 288 Seminar in Community Social Service Organizations**

**3 Credits**

Study of federal, state and local agencies, their functions, limitations and interrelationships. Emphasis on determining the structure and purpose of an agency as related to delivery of human services. A beginning, working knowledge of how to integrate human service skills into over-all activities in the field will be provided. Weekly field work in a selected agency required.

**2 Class Hours, 2 Laboratory Hours**

**Prerequisites:** 6 Credits in psychology or sociology, 3 of which may be taken concurrently.

### **SOS 290 Social Science Field Experience**

**3 Credits**

Introduction to the practical issues of the "helping relationship" and an understanding of agency operations. Each student to spend a minimum of 90 hours working in community social and educational agencies. Weekly seminars, outside reading and written reports are required. During the seminars specific helping techniques such as facilitating, goal-setting, reinforcing and supporting will be analyzed.

**1 Class Hour**

**Prerequisite:** 3 Credit hours in psychology or sociology plus completion of or concurrent enrollment in 3 additional credit hours in either of these areas.



## SOCIOLOGY

### SOC 110 Introduction to Sociology

**3 Credits**

Sociological facts and principles dealing with the scientific study of human relationships. Emphasis on analysis and study of culture and human society, socialization, groups and group structures. Stratification, collective behavioral patterns and the concept of social institutions. Initial experiences for students who desire an introduction to the sociological perspective.  
**3 Class Hours**

### SOC 111 Social Problems

**3 Credits**

The sociology of social and urban problems. Topics may include crime, population, inequality, discrimination, mental illness, attitudes toward work, social control and the dynamics of social change. Students should be aware that individual instructors approach these problems in different ways, depending on students' needs and instructors' interests. SOC 110 Introduction to Sociology is recommended as an initial experience.  
**3 Class Hours**

### SOC 120 Ethnic Groups

**3 Credits**

Survey of the structure and interrelationships of selective ethnic minority groups. The approach is socio-historical, with an attempt to integrate the major theories and techniques of sociological analysis as applied to issues of ethnic concern.  
**3 Class Hours**

### SOC 210 Crime and Deviant Behavior

**3 Credits**

The theoretical aspects of deviance as crime, variations in crime rates, the social and psychological causes of crime, other deviant behavior and the salient research discoveries in these areas. Specific areas within criminology will be reviewed from a multidisciplinary approach to permit as broad an understanding of the problem as possible.  
**3 Class Hours**

**Prerequisite:** SOC 110 Introduction to Sociology

### SOC 230 Marriage, Family and Divorce

**3 Credits**

Social and personal factors which make for adequate family functioning, the forms the family takes, its internal processes and the functions it serves in society. Covers systematically the important theoretical and experimental ground on those issues relevant to both the scholarly and practice-minded student.  
**3 Class Hours**

**Prerequisite:** SOC 110 Introduction to Sociology

### SOC 299 Independent Study

**1-3 Credits**

An individual student project in sociology which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.

**Prerequisite:** 3 semester hours in sociology

## SPANISH

### SPA 101, 102 Beginning Spanish

**4, 4 Credits**

Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.  
**4 Class Hours**

**Prerequisite:** SPA 101 Beginning Spanish for SPA 102

### SPA 201 Intermediate Spanish I

**3 Credits**

Intensive review and continuation of grammar and syntax. Intensive and extensive reading of literary works of recognized authors. Aural comprehension and oral practice in the classroom and audio-lingual laboratory.

**3 Class Hours**

**Prerequisite:** SPA 102 Beginning Spanish

### SPA 202 Intermediate Spanish II

**3 Credits**

Intensive and extensive reading of literary works of recognized authors. Classroom discussion and conversation based on these texts, in the language.

**3 Class Hours**

**Prerequisite:** SPA 201 Intermediate Spanish I

## SPEECH

### SPK 101 Basic Speaking

**2 Credits**

Speech communication through voice, words and action. Voice production, diction, platform presence. Organization of ideas. Practice in presenting speeches of different types. Not for Liberal Arts students.

**2 Class Hours**

### SPK 102 Effective Speaking

**3 Credits**

Speech communication through voice, words and action. Voice production, diction, platform presence. Organization of ideas. Practice in presenting speeches of different types.

**3 Class Hours**

### SPK 104 Basic Speaking for International Students

**3 Credits**

Designed to provide international students with practice, articulation and vocabulary needed to increase self-confidence in English conversation, discussion in the classroom and other daily situations.

**3 Class Hours**

### SPK 105 Intermediate Speaking for International Students

**3 Credits**

Designed for international students emphasizing free and controlled conversation and discussion. Continued practice in articulation, phrasing and vocabulary building.

**3 Class Hours**

**Prerequisite:** SPK 104 Basic Speaking for International Students or equivalent

### SPK 203 Advanced Speaking

**3 Credits**

Designed so that students can review what they have learned in SPK 102 Effective Speaking, learn advanced techniques for informative and persuasive speaking, learn techniques for special speaking occasions. Involvement in a debate as a means of perfecting research techniques, impromptu speaking skills, and the processes of logical thinking and organizing.

**3 Class Hours**

**Prerequisite:** SPK 102 Effective Speaking

### SPK 299 Independent Study: Speech

**1-3 Credits**

An individual student project concerned with advanced work in a specific area of speech. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

**Prerequisite:** 3 semester hours of college level work in speech

## THEATER

### THR 109, 110 Practicum in Theater Design and Technology 3, 3 Credits

Stage design (both lighting and scenic) and construction techniques are studied first hand, as students participate in actual production of two plays each semester. Problems encountered during a production are analyzed. Individualized instruction is increased as students begin to focus on their particular areas of interest.

3 Class Hours each

### THR 111 Beginning Acting 3 Credits

Fundamental acting techniques. Development of individual skills and disciplines relative to external acting techniques. Use of face, voice and movement.

3 Class Hours

### THR 112 Acting 3 Credits

Intensive application of acting techniques through scene study and performance. Problems of character analysis, internal acting and style.

3 Class Hours

### THR 117 Creative Dramatics 3 Credits

Fundamentals of creative dramatics, its use in teaching, recreation and rehabilitation. Introduction to techniques used and practical application opportunities.

3 Class Hours

### THR 151 Theater Production I 3 Credits

Classroom and workshop study relative to production of plays, including historical and dramatic perspective. Script analysis, play selection, audience research, publicity, administration of a theater.

3 Class Hours

### THR 152 Theater Production II 3 Credits

Classroom and workshop training for stage production. Special attention to stage management, operation of stage crews, house management. Coordination of visiting and touring theater companies regarding production and logistics.

3 Class Hours

Prerequisite: THR 151 Theater Production I

### THR 190 Broome Community College Theater 1 Credit

Students who participate in the plays and performances of the BCC Theater Co. receive one credit per semester. See page 30.

### THR 201, 202 Children's Theater 3, 3 Credits

Touring children's theater company during academic year. Performances at area elementary schools for classmate and assembly period programs. Visiting with students pre/post production. Design and construction of costumes, sets and properties. Analysis of children-oriented plays, development of scripts, rehearsal and performance.

3 Class Hours each

### THR 203 Summer Touring Children's Theater Company 3 Credits

Touring children's theater company during summer. Performances at area recreation centers, parks, camps and playgrounds. Visiting with children pre/post production. Design and construction of costumes, sets, and properties. Analysis of children-oriented plays, development of scripts, rehearsal and performance.

3 Class Hours

### THR 218 Role Study and Characterization 3 Credits

The varied creative processes by which an actor might develop a characterization are studied in theory and explored in practice with emphasis upon scenework.

3 Class Hours

### THR 299 Independent Study: Theater 1-3 Credits

An individual student project concerned with advanced work in a specific area of theater. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in theater

## TOOL AND DIE MAKING

### TDA 111 Blueprint Reading 3 Credits

Lines, dimensioning notes. Interpretation of blueprints as used in industry, making plans for operations. Orthographic projection, sketching as related to detail and assembly drawings used in machine shop. Interpretation of drawings of complex parts and mechanisms for features for fabrication, construction and assembly.

3 Class Hours

### TDA 113 Survey of Basic Industrial Safety and First Aid 2 Credits

Work area safety, safe material handling, tool and equipment safety, machinery safeguards, personal protection, electrical safety, hazardous materials and operations, fire prevention, understanding OSHA, first aid.

2 Class Hours

### TDA 114 Benchwork 2 Credits

Description or use of work benches, vices, clamps, hammers, cold chisels. Characteristics of files and filing methods, adjustable and non-adjustable wrenches, twist drills, reamers, broaches, threading taps and dies, hacksaws, contour machines, screw drivers, pliers, shears, surface and height gages, combination sets and automatic punches. Instructions on how to scribe horizontal, vertical, inclined, parallel and perpendicular lines as well as circles and circular areas, cranks, squareness, arms, holes, keyways, templates, cams, sprockets.

2 Class Hours

### TDA 120 Precision Measurement and Inspection 3 Credits

Measuring tools and instruments, simple though complex. Micrometers, verniers, gage blocks, height gages, sine bar, super micrometer, comparators, surface finish comparison, test indicators, toolmakers microscope and optical flats.

3 Class Hours

Prerequisites: MET 113 Engineering Drawing I, MAT 139 Algebra II and MET 121 Manufacturing Processes I

### TDA 130 Tool Grinding 2 Credits

Wheel selection and shapes, oil-stones, honing cutting tools, grinding, single-point tools, angle calculations, universal grinder, drilling grinding, testing drill points. Grinding milling cutters, clearance grinding, tooth rest, grinding side, shank, angular inserted-blade, and helical cutters. Gear cutters, hobs, reamers, taps, radial and tangential chasers. Grinding carbide tools, grinding internal, slab broaches.

1 Class Hour, 2 Laboratory Hours

Prerequisites: MAT 107 Basic Technical Mathematics II

### TDA 132 Statics 2 Credits

Vectors, their composition and resolution, colinear, coplanar, concurrent and nonconcurrent force systems, friction, free body diagrams, tension, shear, compression, first moments, centers of gravity, moments of inertia and truss analysis.

2 Class Hours

Prerequisite: MAT 139 Algebra



**TDA 140 Production Processes****3 Credits**

Theory and application of multi-operation tooling. Automatic tool changes; numeric and other positioning systems to turning, milling, drilling, broaching, grinding, honing. Production inspection techniques including airgauging, coordinate measuring machines.

**3 Class Hours****Prerequisite:** MET 122 Manufacturing Processes II**TDA 200 Metallurgy****2 Credits**

Ferrous and non-ferrous alloys including annealing, normalizing, quench hardening, tempering, age hardening, austempering. Hardness testing, microscopic examination of metallic structures, phase modification, phase diagrams. Laboratory exercises to support theory.

**1 Class Hour, 2 Laboratory Hours****Prerequisite:** MET 121 Manufacturing Processes I**TDA 230 Tool Design****4 Credits**

Introduction to the problems of tool design with emphasis on planning the processes of production, designing and developing the necessary tools, and utilizing available manufacturing facilities. Practical analysis and comparison of the use and cost of tools, jigs and fixtures, dies, molds and gages as they are used in modern manufacturing.

**4 Class Hours****Prerequisites:** MET 122 Manufacturing Processes II and MAT 139 Algebra**TDA 235 Strength of Materials****3 Credits**

Theory of stress and strain as applied to select engineering materials, particularly important in the design and construction of tools and dies. Studies in tension, compression, shear, flexure, thermal changes in metallic and non-metallic materials.

**3 Class Hours****Prerequisite:** TDA 132 Statics**TDA 248 Hydraulics and Pneumatics****3 Credits**

Basic theory of hydraulic and pneumatic systems. Combinations of systems in various circuits, basic designs and functions of circuits and motors, controls, electro-hydraulic servo-mechanisms, plumbing, filtration, accumulation and reservoirs.

**2 Class Hours, 2 Laboratory Hours****Prerequisite:** TDA 132 Statics**TDA 250 Control Systems****3 Credits**

Hydraulic, pneumatic, mechanical, electrical and electronic control systems and components. Basic description, analysis and explanation of operation. Typical performance characteristics, limitations on performance accuracy, applications and their utilization in industrial processes.

**3 Class Hours****Prerequisites:** MET 122 Manufacturing Processes II and TDA 248 Hydraulics and Pneumatics**TDA 261 Introduction to Quality Control  
and Inspection****3 Credits**

Introduction to inspection devices and practices. Basic statistical techniques as they relate to the use of control chart sampling plans and related quality control procedures.

**3 Class Hours****Prerequisite:** MAT 139 Algebra

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KATHERINE S. KADISH, Asst. Prof.  
B.F.A., Carnegie-Mellon University  
M.A., University of Chicago  
ROBERT A. KELLER, Asst. Prof.  
Pratt Institute  
MICHAEL KINNEY, Assoc. Prof.  
B.A., Glassboro State College  
M.M., SUNY at Binghamton

JOSEPH PETRONE, Asst. Prof.  
B.A., SUNY at Binghamton  
HAROLD SUNSHINE, Assoc. Prof.  
B.A., M.Ed., SUNY at Buffalo  
PATRICIA WELLER, Assoc. Prof.  
A.A., Broome Community College  
B.A., SUNY at Binghamton  
ANGELO ZUCCOLO, Assoc. Prof.  
B.A., Providence College  
M.A., SUNY at Binghamton  
**Emeritus**  
HERBERT CHURCH-SMITH  
MILTON KIRKPATRICK

## INDUSTRIAL SAFETY AND OCCUPATIONAL HYGIENE

See this heading under Adjunct Faculty

## CECIL C. TYRRELL LEARNING RESOURCES CENTER

JAMES D. BAKER, Director  
B.S., Ithaca College  
M.S.L.S., Syracuse University  
JANET K. GREENMUN  
A.A., Keystone Junior College  
B.A., Lycoming College  
M.L.S., SUNY at Albany  
JANE M. RAWOOF, Asst. Librarian  
B.A., George Washington University  
M.S.L.S., Catholic University

SUZANNE G. SULLIVAN, Assoc.  
Librarian  
B.A., Nazareth College  
M.S.L.S., Syracuse University  
MARGARET A. WINGATE  
B.A., Boston University  
M.L.S., SUNY at Albany  
M.A., SUNY at Binghamton  
**Emeritus**  
JOAN L. FOLEY  
ERNEST ESTES

## LEARNING SKILLS CENTER

A. STEVEN NATALE, Chairman  
B.A., St. John Fisher College  
M.A., SUNY College at Brockport  
VIRGINIA KILTY, Tech. Asst. II  
A.B., Syracuse University  
M.S., University of Bridgeport  
LINDA KOVACS, Asst. Prof.  
B.A., Keuka College  
M.Ed., University of Florida

MARGARET D. LUCIANO, Asst. Prof.  
A.B., M.A., SUNY at Albany  
CAROLE E. STEPHENS, Tech. Asst.  
B.S., Elmira College  
M.A., SUNY at Binghamton  
ANN D. SOVA, Asst. Prof.  
B.A., SUNY College at Oswego  
M.A., SUNY College at Cortland

## LIBERAL AND GENERAL STUDIES

LLOYD W. HARTMAN  
Professor Emeritus  
HAROLD W. HICKEY  
Dean Emeritus

GEORGE HIGGINBOTTOM  
Dean of the Division  
A.B., Harvard University  
M.A., San Francisco State  
University



## MATHEMATICS DEPARTMENT

WILLIAM G. VICK, Chairperson  
B.A., M.A., Colgate University  
RALPH S. BEGEAL, Asst. Prof.  
B.S., Mansfield State College  
M.A., Central Michigan University  
ANN CLEARY, Asst. Prof.  
A.B., Marywood College  
M.S.T., SUNY at Binghamton  
THADDEUS CZUPRYNA, Prof.  
B.A., SUNY at Binghamton  
M.S., Cornell University  
M.S., Syracuse University  
DANIEL W. DODWAY, Assoc. Prof.  
B.S., St. Lawrence University  
M.S., SUNY at Albany  
PAUL J. EARL, Assoc. Prof.  
B.S., Wilkes College  
M.A., Rutgers University  
MORTON GOLDBERG, Prof.  
B.A., SUNY at Binghamton  
M.A., SUNY at Buffalo  
CARMELITA KEYES, Asst. Prof.  
B.A., University of Kansas  
M.A.T., SUNY at Binghamton  
VIRGINIA KILTY, Tech. Asst. II  
A.B., Syracuse University  
M.S., University of Bridgeport

## MECHANICAL ENGINEERING TECHNOLOGY

Appointment Pending for  
Department Chairperson  
HERBERT L. DURST, Prof.  
B.S., Drexel Institute of Technology  
BLAINE K. ELLIS, Prof.  
A.A.S., Broome Community College  
B.M.E., M.S., Rochester Institute  
of Technology  
DAVID MICHALAK, Tech. Asst. II  
A.S., Broome Community College  
B.S., Rochester Institute of  
Technology  
M.S., SUNY at Binghamton

MARIELLEN LAYTON, Asst. Prof.  
B.S., Chestnut Hill College  
M.A., Villanova University  
JOSEPH F. MILENSKY, Prof.  
B.A., SUNY at Binghamton  
M.A., University of New Mexico  
PAUL O'HERON, Asst. Prof.  
A.A., A.A.S., Monroe Community  
College  
B.S., SUNY College at Fredonia  
M.S., Michigan State University  
RICHARD L. REMIZOWSKI, Asst. Prof.  
A.A.S., Mohawk Valley Community  
College  
B.A., SUNY College at Oswego  
M.A., SUNY at Buffalo  
CHARLES RICKER, Prof.  
B.A., Hartwick College  
M.A., SUNY at Albany

### Emeritus

GORDON DATES  
IRVIN C. SIMSER

## MEDICAL ASSISTANT

MARY E. SCHUM, Chairperson  
B.Ed., SUNY College at Fredonia  
M.S., St. Bonaventure University

TERESSA H. BURAN, Assoc. Prof.  
B.A., Alfred University  
M.S.T., SUNY at Binghamton

### Emeritus

CLYDE CHAUNCEY

## MEDICAL LABORATORY TECHNOLOGY

JULIA E. PEACOCK, Chairperson  
B.S., Michigan State University  
M.S., SUNY Upstate Medical Center

MAXIMILIAN D. BORSKI, Asst. Prof.  
B.S., Southwest Missouri State  
College  
M.S., University of Missouri

## MEDICAL RECORD TECHNOLOGY

MARY ROSATO, Chairperson  
B.S., Mercy College  
M.A., SUNY at Binghamton  
R.R.A.

JANE HLOPKO, Instr.  
A.A.S., Broome Community College  
A.R.T.

## NURSING

JANET WRIGHT, Chairperson  
B.S., M.S.N., Syracuse University  
DOROTHY DOANE, Instr.  
B.S., Alfred University  
FLORENCE EWANOW, Asst. Prof.  
B.S., Keuka College  
SARAH J. HANNAWAY, Prof.  
B.S., Boston University  
M.S.N., Boston College  
J. PATRICIA LEE, Asst. Prof.  
B.S., Keuka College

BARBARA MARCKX, Asst. Prof.  
B.S.N., Georgetown University  
M.S.N., University of Colorado  
RUTHE B. O'BOYLE, Asst. Prof.  
B.S., Syracuse University  
MARY A. E. PRICE, Assoc. Prof.  
B.S., Villanova University  
M.S.N., Boston University  
JACQUELINE M. SHRADER, Asst. Prof.  
B.S.N., Niagara University  
M.S.N., Syracuse University

## OFFICE TECHNOLOGIES

CHESTER J. BUGLIA, Chairperson  
B.S., Pennsylvania State University  
M.Ed., Bloomsburg State College  
ELIZABETH B. ALTENHOFEN, Asst.  
Prof.  
B.S., Hartwick College  
JOAN BANDURCHIN  
A.A.S., Broome Community College  
B.S., Kent State University  
M.S., SUNY College of Technology  
MARIE DAVENPORT, Assoc. Prof.  
A.A.S., Broome Community College  
B.S., M.S., SUNY at Albany

CORINNE CRANDELL, Asst. Prof.  
A.A.S., Mohawk Valley Community  
College  
B.S., SUNY at Albany  
M.S., SUNY College at Oneonta  
EVELYN A. KATUSAK, Prof.  
B.S., M.S., SUNY at Albany  
ESTER SABOL  
Coordinator of Wood Processing  
Center/Model Office  
A.A.S., Broome Community College  
B.S., SUNY College of Technology  
DORATHY SAEGER, Assoc. Prof.  
B.A., Valparaiso University  
M.B.A., University of Denver

### PARALEGAL ASSISTANT

See this heading under Adjunct Faculty

### PHYSICAL EDUCATION

OZMUN G. WINTERS, Chairperson

B.A., Syracuse University

M.S., Ithaca College

RICHARD E. BALDWIN, Prof.

A.B., Ed.M., University of  
Rochester

EDWIN C. DAUB, Assoc. Prof.

B.S., M.S., SUNY College at Cortland

DUANE WHITTAKER, Asst. Prof.

B.S., SUNY College at Cortland

### PHYSICAL PLANT

RALPH WALTER

Assistant to Vice President

### PHYSICS

See Engineering Science and Physics

### PLACEMENT

ANNE M. SCOTT, Director

B.S., SUNY College at Cortland

M.P.S., University of Colorado

LAWRENCE TRUILLO

Staff Assistant

A.A., Broome Community College

B.A., SUNY College at Oneonta

### PLANNING AND RESEARCH

DIRECTOR

Appointment Pending

ERIC E. BEAMISH

Directory of Educational Technology

B.S., Concordia College

M.A., Ed.D., Columbia University

### PUBLIC RELATIONS

See Community Relations

### RADIOLOGIC TECHNOLOGY

NANCY BUTTON, Chairperson

R.T., Nesbitt Memorial Hospital

School of Radiologic Technology

B.A., Wilkes College

M.S., Marywood College

JANE DeMARIA, Instr.

A.A.S., Broome Community College

B.S., Medical College of Georgia

M.S., SUNY at Binghamton

BARBARA VALENTINO, Instr.

A.A.S., Broome Community College

B.P.S., SUNY Empire State College

### REGISTRAR'S OFFICE

REGISTRAR

Appointment Pending

ROSEMARY ZINNER

Assistant Registrar

A.A.S., Broome Community College

B.S., SUNY at Binghamton

### SPECIAL CAREER PROGRAMS

FRANCIS J. SHORT, Chairperson

A.A., Broome Community College

B.A., SUNY College at Geneseo

M.S., SUNY at Albany

WILLIAM F. MICHALEK, Coordinator or

Criminal Justice Program

B.A., Valparaiso University

M.S., Arizona State University

### STUDENT ACADEMIC ADVISEMENT CENTER

See this heading under Adjunct Faculty

### STUDENT ACTIVITIES

R. BRUCE MacGREGOR, Director

B.Mus., Syracuse University

M.S., Ithaca College

### TOOL AND DIE MAKING

Appointment of Coordinator Pending

For faculty, see heading under Adjunct Faculty

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## ADJUNCT FACULTY

The following taught part-time at the College  
during the 1983-84 academic year.

### ACADEMIC ADVISING

See Student Academic Advisement Center

### ADMISSIONS

Anthony M. Sacco

### AUDIO-VISUAL

Glenda Newell-Blake

### BIOLOGICAL SCIENCES

Sandra Edwards



Annamary Allen  
Fred Booth  
William Condie  
Thomas Coulson  
Lucia M. Davis  
George Decker  
Sean Faughnan  
Ronald C. Finch  
Sally Gillespie  
Robert Giordano  
Frank Greco

## BUSINESS

John Noreika  
Sal Peretore  
Edward Petras  
Richard Powell  
Lloyd A. Rogers  
George C. Shea  
Richard Tucker  
Raymond Van Ness  
Nancy Van Winkle  
Dennis Walker  
Harry M. Watson, Jr.

## CAD/CAM CENTER

(Computer Aided Design/Computer Aided Manufacturing)

Karl Daday

## CHEMICAL ENGINEERING TECHNOLOGY

Peter Buchta  
Michael Kril

David M. Minerly  
Muthuraman Ven Kateswaran

## CHILD CARE

Marilyn J. Schafer, Coordinator  
Lois Blake  
Sonya Brown  
Darlene Darrow

Diana D. Good  
Laurie Henderson  
Peggy Naismith  
Barbara Reining

## CIVIL ENGINEERING TECHNOLOGY

Richard J. Polizatto

Donald F. Brown

## COMPUTER STUDIES

Robert Armitage  
Jessie Browne  
Fred Clark  
George Corbett  
Lucia Davis  
Susan Gilbert  
Sally Giuffrida  
Beverly Hurlburt  
Fiona McFadden

Linda Mesmer  
James Miner  
James Mollen  
Linda Mooney  
Carlene Ondik  
Richard Orringer  
Cynthia Sailor  
Harold Sodeur

## CRIMINAL JUSTICE

Louis Crosetto, Jr.  
Paul A. Dinardo  
Frederick J. Meagher, Jr.

Stephen L. Vizvary  
Thomas Walsh

## DENTAL HYGIENE

Carol Beddoe

Kathy Ann Simpson

## DIETETIC ASSISTANT

Lorraine B. Gula, RD, Coordinator  
Judy Komoranitz, RD

Joanne Niziolek, RD

## ELECTRICAL ENGINEERING TECHNOLOGY

Arthur Bouley  
Christopher Conant

William S. George

## ENGINEERING SCIENCE AND PHYSICS

Donald E. Brown  
Richard Polizatto

Peter Ruggieri  
Walter F. Wintsch

## ENGLISH

Kristine Anderson  
Victoria Belenkaya  
David Howland

Jerald Mirskin  
Donald Phillips  
Patricia Reid

## FIRE PROTECTION TECHNOLOGY

Anthony Winkler, Jr., Coordinator  
John Kratochvil

James Ryan  
Gary Ryman

## HISTORY AND SOCIAL SCIENCES

Sharon Bournas  
Gail Brownell  
Kerrie Ann Doyle  
Stephanie Hoffman  
Susan Howard

Pamela Poetzl  
Ruffin S. Pauszek  
David M. Regan  
Sandra Sketchley

## HUMANITIES

Darrel Colombo  
Anne Cotton  
Norman Davies

Lola Kaminsky  
Beverly McLean

## INDUSTRIAL SAFETY & OCCUPATIONAL HYGIENE

Leo Kranefuss

## LEARNING SKILLS CENTER

Mary Lou Raykovic

## MATHEMATICS

Joan Dodway  
William F. Flockhart  
Michael Iannone  
Elizabeth Klipsch  
Mariellen Layton

Patricia Livermore  
John Nardocci  
Janice Pitera  
Mary Wolyniak

## MECHANICAL ENGINEERING TECHNOLOGY

Kenneth W. Bean  
John F. Bruce  
Ronald Carrol  
Phillip Darling  
Laimons E. Drupa  
Louis Evangelisti  
David Foote  
William Greene  
David C. Hagerman

Gary D. Mott  
Edward Prybylski  
William G. Stewart  
Harry A. Thor  
Billie Vest  
Richard Vlasak  
Lowell Williams  
Robert Zielewicz

Mary Ellen Hall  
Maureen Hozempa  
Jane Palombaro

# **MEDICAL ASSISTANT**

Barbara Signor  
Deanna Tanner

# **NURSING**

Marguerite Mc Donough

Elizabeth Phelps  
Kathleen Valentine

# **OFFICE TECHNOLOGIES**

Agatina Vallone

Elaine Andrejko  
Robert Lane

# **PARALEGAL ASSISTANT**

Matthew Vitanza, Coordinator  
Jon Biechman  
Susan Cardone

F. Daniel Casella  
Eileen Lannen  
Michael Wright

# **PHYSICAL EDUCATION**

Nancy C. Kendrot

Gary Brodbeck  
Thomas D. Carter

# **SECRETARIAL SCIENCES**

Agatina Vallone

Elaine Andrejko  
Robert Lane

# **STUDENT ACADEMIC ADVISEMENT CENTER**

Vincent Cavanaugh  
Paulette Gannett  
Douglas Garner

Margaret Pimpinella  
Glen Wood

# **SPECIAL CAREERS**

Barbara Reining

Darlene Darrow  
Laurie Henderson

# **STUDENT AFFAIRS**

Charles Hutchinson

# **TOOL AND DIE MAKING**

William Decker  
Kishor Desai  
Michael Glasgow  
David Hagerman  
Donald Pixley  
Donald Scott

William Stewart  
Roy Taylor  
Harry A. Thor  
Billie Vest  
Gary Wiesing

# **CLINICAL AFFILIATE FACULTY**

# **MEDICAL ASSISTANT**

Brenda Brink, C.M.A.  
Barbara Dodd, A.S., C.M.A.  
M. Ellen Donovan  
Bea Grace, R.N.  
Cathy Grant, M.A.  
Karen Hayslett, A.A.S.  
Cindy Lake, C.M.A.  
Dawn McNeil, A.A.S.  
Paula Mollo, A.S., C.M.A.  
Susan Murphy, A.S., C.M.A.

Patricia Paden, A.S., C.M.A.  
Pauline Patterson, L.P.N.  
Geraldyn Paviglianti, A.S., C.M.A.  
Gloria Soudas, A.S.  
Maria Tiff  
Amy Traver, C.M.A.  
Illa Van Fleet, A.A.S.  
Paula Weingartner, A.A.S., C.M.A.  
Louise Williams, L.P.N.  
Cher Zmitrowitz

# **MEDICAL LABORATORY TECHNOLOGY**

Barbara Bagan, M.T. (ASCP)  
Angelo Carro  
Carla Chamberlain, M.T. (ASCP)  
James Clements, B.S.  
G.A. Fattai, M.D.  
John Finn, M.T. (ASCP)  
Susan Gaines  
Anne Gilfillan, B.S., M.T., S.H. (ASCP)  
Mary Greene, B.S., M.A.  
Simon Hirsche, M.D.  
Kenneth Hull, B.S.  
Alzina Johnson, M.T. (ASCP)

Stanley Konopka, Ph.D.  
Z.J. Kuczala, B.S.  
James Lockwood, M.T. (ASCP)  
John Miller, Ph.D.  
Irene Moon, M.T. (ASCP)  
Theresa Murphy  
Linda Redmond, B.S., M.S., M.T. (ASCP)  
Linda Runne  
Evelyn Thomas, B.S.  
Robert Tuggey, Ph.D.  
Lyla Wolford, S.C. (ASCP), M.T. (ASCP)  
John Walters, B.S.  
Patricia Walsh, B.S., M.T. (ASCP)  
Loren Wolsh, M.D.

# **MEDICAL RECORD TECHNOLOGY**

Sue Bice, A.R.T., B.A.  
V. Jane Casamento, A.R.T., B.S.  
Dorothy Erney, R.R.A., B.S.  
Margaret Gallagher, A.R.T.  
Mary Jo Bowie, R.R.A., B.S., A.R.T., A.A.S.

Cathy Komblatt, A.R.T., A.A.S.  
Janet Miller, A.R.T., A.A.S.  
Marlene Okoniewski, A.R.T., A.A.S.  
Sandra Thompson, A.R.T., A.A.  
Lorraine Wheeler, A.R.T., A.A.S.



## CURRICULUM ADVISORY COMMITTEES

The College's career-oriented curriculums have advisory committees to help maintain an awareness of the changing skill and training needs in the particular fields; establish communication among the college, the community, employers and educational representatives; and advise the College about career curriculums on a continuing basis. These advisory committees are comprised of a cross-section of people involved in each field. Following is the make-up of the respective advisory committees:

### BUSINESS AND OFFICE TECHNOLOGIES DIVISION

#### BUSINESS

JOSEPH BALOK General Electric	JOHN KANICK Ketrick Insurance
RONALD BARBER Matco Electric Co.	JOANNE KOCAK Tri-Cities Communication
DONALD BEHR Great American Stores	ROBERT LINDSLEY Security Mutual Life Insurance Co.
FRANK BERRISH IBM Credit Union	ANTHONY MAIONE Vestal, N.Y.
DAVID CAHILL Dean, Witter, Reynolds, Inc.	RAYMOND MC CORMACK WBNG-TV
FAYE CLAUS Metrocenter	BRIAN MC MAHON McMahon & Blum Co.
RUTH GDOVIN Singer-Link Co.	SCOTT PAKEL Raymond Corp.
JOSEPH GOLDEN Ozalid Corp.	VINCENT PASQUALE State University of NY at Binghamton
EDWIN HOGG Chase Lincoln First Bank	DENNIS WALKER Lauder & Lauder

#### OFFICE TECHNOLOGIES

DEBBIE DELUCIA Binghamton Savings Bank	RUTH SMITH WBNG-TV
EVELYN HART Singer-Link Co.	ANDREA TOTMAN IBM Corp. in Owego
VIVIAN ROBILLOTTO Chernin & Gold, attorneys	KAREN TREICHLER Ozalid Corp.
BERNARD SETTA General Electric	

## HEALTH SCIENCES DIVISION

#### DENTAL HYGIENE

THOMAS CARDOZA, D.D.S. Periodontist	LAWRENCE ROUFF, D.D.S. Orthodontist
MARY JOHNSTON Dental Hygienist	CAROLE STANLEY Dental Hygienist
ARLENE KONIUTO Dental Hygienist	LINDA WHITE Dental Hygienist
DAVID PAYNE, D.D.S. Oral Surgeon	STUDENT, appointed annually
A.J. PERNA, D.D.S. General Practice	

#### DIETETIC ASSISTANT

LOIS BENTLAGE, RD Consulting Dietician Oak Hill Manor Nursing Home Ithaca, NY.	ELEANOR LITTLE Administrator Good Shepard Nursing Home Binghamton, NY.
BETTY FIASCHI, CDA Good Shepard Nursing Home Binghamton, NY.	JOAN MASTRONARDI, RD Dietetic Department Binghamton General Hospital
JOSEPH GAY Dean of Health Sciences Broome Community College	MARGARET SIMPSON, RD Regional Director N.Y. State Department of Health Binghamton, NY.
LORRAINE GULA, RD Coordinator Dietetic Assistant Program Broome Community College	BARBARA WEST, RD Chief Clinical Dietician Lourdes Hospital
JOAN M.L. KOCH, RD Nutritional Sciences Cornell University	STUDENT, appointed annually

#### MEDICAL ASSISTANT

DR. BRUCE BOWLING Endwell Primary Care Affiliates	BEA GRACE Endwell Primary Care Affiliates
JOAN CEASE Orthopedic Associates Binghamton, N.Y.	DR. JOHN MANZARI Director, Pulmonary Services Wilson Memorial Hospital
MARY CUOMO Pediatric Services Wilson Memorial Hospital	KATHLEEN SPOLSKY Medical Assistant
M. ELLEN DONOVAN Medical Assistant Chenango Bridge Medical Center	DR. FREDERICK WHITING Binghamton, NY.
JOSEPH GAY Dean of Health Sciences Broome Community College	STUDENT, appointed annually

### MEDICAL LABORATORY TECHNOLOGY

JOHN FINN  
Binghamton General Hospital

JOSEPH GAY  
Dean of Health Sciences  
Broome Community College

MARY GREEN  
Lourdes Hospital

ROBERT LEVIN  
Clinical Pathology Unit  
Norwich-Eaton Pharmacal Co.  
Norwich, NY.

JULIA PEACOCK  
Chairperson  
Medical Laboratory Technology  
Broome Community College

JOHN WALTERS  
Wilson Medical Center

DR. LOREN WOLSH, Chairman  
Wilson Medical Center

STUDENT, appointed annually

### MEDICAL RECORD TECHNOLOGY

CLAIRE CHAPMAN, R.R.A.  
Medical Record Administration  
Program  
Ithaca College

DOROTHY ERNEY, R.R.A.  
Director, Medical Records  
Binghamton Psychiatric Center

JOSEPH K. GAY  
Dean of Health Sciences  
Broome Community College

JANET MILLER, A.R.T.  
Director, Medical Records  
United Health Services

K. A. SNIESKA, M.D.  
Chenango Bridge Medical  
Group

STUDENT, appointed annually

### NURSING

ROBERT ABER  
President  
Chemical Bank of Binghamton

MARION ARDELL  
Guidance Office  
Vestal High School

DR. DAVID BLOOM  
Binghamton, NY.

PATRICIA BROWN  
Binghamton, NY.

FLORENCE EWANOW  
Assistant Professor  
Broome Community College

SHIRLEY FRAILEY  
Director of Nursing  
Lourdes Hospital

CECILIA GOURLEY  
Binghamton, NY.

SARAH HANNAWAY  
Professor  
Broome Community College

MARILYN HENRY  
SUNY Binghamton  
School of Nursing

JOHN HUDONICH  
Binghamton, NY.

EVELYN KATUSAK  
Professor  
Broome Community College

MARGARET LUCIANO  
Assistant Professor  
Broome Community College

BLANCHE MACK  
American Heart Association  
Binghamton, NY.

REV. PHILLIP MITCHELL  
First Congregational Church  
Binghamton, NY.

BEVERLY OCHIAI  
Vestal, NY.

STUDENT, appointed annually

### RADIOLOGIC TECHNOLOGY

ANDREW ADAMS, M.D.  
Binghamton, NY.

Binghamton General Hospital  
Department of Radiology

MARIO CEBALLOS, M.D.  
FRANK EMICK, R.T.

Broome Community College

NANCY BUTTON, R.T.

DOROTHY DARRIN, R.T.

LINDA DEAN, R.T.

JANE DEMARIA, R.T.

JOSEPH GAY, dean of  
health sciences

PAMELA HOFFMAN, R.T.

MARDELLE VEST, R.T.

STUDENT, appointed annually

Our Lady of Lourdes Hospital  
Department of Radiology

LEWIS DOSIK, M.D.

PHILIP FRANCIS, R.T.

PATRICIA KINNEY,  
supervisor

FRANKLIN MC SHANE, VP of  
Clinical Services

MARY NORMILE, patient  
advocate

Wilson Memorial Hospital  
ALAN KOPMAN, director  
Department of Radiology

## TECHNOLOGY, ENGINEERING AND COMPUTING DIVISION

### CHEMICAL ENGINEERING TECHNOLOGY

FEYYAZ BASKENT  
Union Carbide Corp.

JAMES DORSEY  
Eastman Kodak

DR. CARL ERNST  
Anitec Image Corp.

BARBARA LASKY  
NYS Electric and Gas

DR. LOU LIETO  
Norwich-Eaton Pharmaceuticals

MICHAEL MC DONALD  
Corning Glass Works

JOHN SUSKO  
IBM Corp

PATRICIA WEISLANDER  
Sandia Corp.

DR. WILLIAM WITTOSCH  
International Paper Co.

### CIVIL ENGINEERING TECHNOLOGY

DAVIS BURRITT  
President  
Murray Walter, Inc.

FRANK W. CONNELL  
President  
McFarland Johnson Engineers,  
Inc.

JAMES CONNOR  
District Engineer  
NYS Department of  
Transportation  
Binghamton, NY.

DENNIS T. O'DEA  
NYSEG

GARY WOOD, P.E.  
Empire Soils Investigation, Inc.  
Groton, NY.



## COMPUTER STUDIES

JOSEPH BOYER Security Mutual Life Insurance	WILLIAM MC ARTHUR Universal Instruments
GORDON BROWNLOW Universal Instruments	DAVE MC LOUGHLIN Professor Broome Community College
THOMAS CARTER General Electric	BETH MOLLEN Instructor Broome Community College
DAVID COPELAND Digital Equipment Corp.	HERMAN SCHMID General Electric
MICHAEL DAUGHERTY Singer-Link Co.	HUGH SLAWSON McFarland-Johnson Engineers, Inc.
GENE KRAUSE Director, Computer Center Broome Community College	JOHN TORRES Doron Precision Systems
ROBERT LESKO Raymond Corp.	PATRICK WALSH IBM Corp.

## ELECTRICAL ENGINEERING TECHNOLOGY

ROBERT COLE IBM Corp.	ELDRED PAUFVE Universal Instruments
JOHN CZEBINIAK Universal Instruments	ROBERT PIERDOMENICO NYSEG
JOHN EKSTROM NYSEG	DAVID ROTHERFORTH Private consultant
CRAIG HOFFMAN Savin Corp.	SAMUEL STOKES General Electric
ROBERT NEW Singer-Link Co.	CHARLES TAYLOR SUNY at Binghamton
ROBERT O'CONNOR General Electric	JACK WHITE IBM Corp.
RICHARD PAINTER Singer-Link Co.	ARTHUR WILCOX Singer-Link Co.

## MECHANICAL ENGINEERING TECHNOLOGY

FRED BARTHOLOMEW Market Services Manager Raymond Corp.	GARY OSTRANDER Associate Professor Broome Community College
HERBERT DURST Professor Broome Community College	RAYMOND PERINE Vice-President NYSEG
BLAINE ELLIS Associate Professor Broome Community College	DOUGLAS RITTENHOUSE Assistant Professor Broome Community College
LOUIS EVANGELISTI Supervisor, Drafting Standards Singer-Link Co.	HERBERT SWAN Retired IBM
PETER MAJESTIC Research & Development Corning Glass	

## TOOL & DIE PROGRAM

LEWIS CLARK E.H. Titchener & Co.	ART MARKEY Stow Mfg. Co.
HERBERT DURST Professor Broome Community College	SY MATHEY Electro Form Corp.
BLAINE ELLIS Associate Professor Broome Community College	JAMES MC ELHATTEN Broome BOCES
CHET LENCESKI Broome BOCES	DINO SPAGNOLLI Universal Instruments
JIM LOTT IBM Corp.	ROY TAYLOR Singer-Link Co.

## LIBERAL AND GENERAL STUDIES DIVISION

### INTERIOR DESIGN

ANNE COTTEN Interior designer and Broome Community College Adjunct faculty	BEVERLY MC LEAN Designer
ROBERT KELLER Assistant Professor, Art Broome Community College	LILLIAN NEZELEK Guidance Counselor Binghamton High School
CORINNE MAXON Professor, Home Economics SUNY College at Oneonta	

## SPECIAL CAREER PROGRAMS

### CHILD CARE

HELEN BUEMI Day Nursery Association	MARILYN SCHAFER Coordinator, Child Care Broome Community College
LIBBY HOBART Broome Cooperative Extension	KATHLEEN SHAMULKA BCC student
EUNICE MILLER First Methodist Pre-School Endicott, NY.	FRANCIS SHORT Department chairman Broome Community College
	LOIS WESTGATE Riverside Drive Nursery

### CRIMINAL JUSTICE

ROBERT KENT Broome County Parole Board	DAVID NEMEC Broome County Probation
WILLIAM MICHALEK Coordinator, Criminal Justice Broome Community College	JOHN SEJAN Binghamton Chief of Police
HON. PATRICK MONSERRATE Broome County Judge	FRANCIS SHORT Department chairman Broome Community College

## **FIRE PROTECTION TECHNOLOGY**

NANCY CAMPBELL  
BCC alumna  
DAVID DARLING  
JEROME FIVES  
IBM Corp. in Endicott

FRANCIS SHORT  
Department chairman  
Broome Community College  
ANTHONY WINKLER  
1st Assistant Fire Chief  
Binghamton, NY.

## **INDUSTRIAL SAFETY & OCCUPATIONAL HYGIENE**

LEO KRANEFUSS  
IBM Corp. in Endicott  
DAVID MUMMERT  
Versar, Inc.  
ANDRIS OLMETTI  
Associated Building Contractors  
DONALD PIXLEY  
Lourdes Hospital

STANLEY POPLIERSKI  
Aetna Life & Casualty  
FRANCIS SHORT  
Department chairman  
Broome Community College  
MACARY TARNOFF  
Columbian Mutual Life  
Insurance  
VINCENT TAYLOR  
NYSEG

## **PARALEGAL ASSISTANT**

JON BLECHMAN  
Attorney at Law  
JOAN DEBRUIN  
Hinman, Howard & Kattel,  
attorneys  
IDA GIALANELLA  
Surrogate Court  
SALLY GILLESPIE  
Labor-Management Mediator  
THOMAS HULL  
Attorney at Law  
HON. JOHN HILLIS  
Binghamton City Court Judge  
THOMAS HULL  
Attorney at Law

BEVERLY LEGOS  
Court of Claims  
MADELINE NEMCEK  
Scanlon & Vetrano, attorneys  
TANYA SCHMELER  
Columbian Mutual Life  
Insurance  
FRANCIS SHORT  
Department chairman  
Broome Community College  
MATTHEW VITANZA  
Attorney at Law  
Coordinator, Paralegal Asst.  
Broome Community College

## **OTHER**

### **VOCATIONAL EDUCATION**

M. JEANNE ALLISON  
Registered Occupational  
Therapist  
Wilson Medical Center  
(Representing Labor)

PETER AUSTIN  
President  
Binghamton Brick Co.  
(Representing Business)

IDA GIALANELLA  
Deputy Clerk  
Broome County Surrogate  
Court  
(Representing Labor)

VIOLET MC HALE  
Corporate Secretary  
Binghamton Savings Bank  
(Representing Business/Labor)

ROBERT NEW  
Senior Member Technical Staff  
Singer-Link Co.  
(Representing Industry)

DINO SPAGNOLI  
Personnel Manager  
Universal Instruments  
(Member at large)

EDWARD STRATTON  
Manager  
Data Processing Division  
IBM Corp.  
(Representing Business/  
Industry)

GERALD TAYLOR  
Principal  
Chenango Forks Central School  
(Representing Secondary  
Schools)



# STATE UNIVERSITY OF NEW YORK (SUNY)

CLIFTON R. WHARTON, JR., Chancellor

Broome Community College is one of the 64 colleges that comprise the State University of New York (SUNY), which was established by the State Legislature in 1948. The 64 units include 30 locally-sponsored two-year community colleges like Broome.

The University's 64 geographically dispersed campuses bring educational opportunities within commuting distance of virtually all New York citizens. In academic 1983-84 more than 380,000 students enrolled in its classrooms or pursued study at home, at their own pace, through such innovative institutions as Empire State college, a campus without walls. Of the 380,000, about 30 percent are 24 years of age or older.

The University is uniquely organized into a system comprised of:

Four University centers, two medical centers, 12 colleges of arts and sciences, a non-residential college, four specialized colleges, five statutory colleges, six agricultural and technical colleges, and 30 locally-sponsored community colleges.

In addition to baccalaureate studies, 12 of the senior campuses offer graduate study at the doctoral level, and 22 at the master's level.

The two-year colleges offer associate degree opportunities in a wide range of technical areas. They also provide transfer programs for students wishing to continue to the baccalaureate degree. In the 1983-84 college year, the community colleges enrolled more than 184,000 students. This number is about equally divided into full-time and part-time categories. Ten Educational Opportunity Centers serve the educationally deprived by upgrading occupational skills for more gainful employment and identifying students with college potential to prepare them for enrollment in the state's public and private colleges.

State University is governed by a Board of Trustees, appointed by the Governor, which determines the policies to be followed by the 34 State-supported campuses. The 30 community colleges operate under the program of State University and have their own local boards of trustees. SUNY's motto is "To Learn-To Search-To Serve," which emphasizes the University's three-fold mission of education, research and public service.

During its brief history, State University has graduated more than 930,000 alumni, the majority of whom are pursuing their careers in communities across the state.

## UNIVERSITY CENTERS

State University at Albany  
State University at Binghamton  
State University at Buffalo  
State University at Stony Brook

## COLLEGES OF ARTS AND SCIENCE

College at Brockport  
College at Buffalo  
College at Cortland  
Empire State College  
College at Fredonia  
College at Geneseo  
College at New Paltz  
College at Old Westbury  
College at Oneonta  
College at Oswego  
College at Plattsburgh  
College at Potsdam  
College at Purchase

## SPECIALIZED COLLEGES

College of Environmental Science and Forestry at Syracuse  
Maritime College at Fort Schuyler  
College of Technology at Utica/Rome  
† Fashion Institute of Technology

## \*STATUTORY COLLEGES

College of Agriculture and Life Sciences at Cornell University  
College of Ceramics at Alfred University  
College of Human Ecology at Cornell University  
School of Industrial and Labor Relations at Cornell University  
College of Veterinary Medicine at Cornell University

\*These operate as "contract colleges" on the campuses of private universities.

† While offering a limited number of baccalaureate degree programs, in addition to the associate degree, FIT is financed and administered in the manner provided for community colleges.

## COLLEGES AND CENTERS FOR THE HEALTH SCIENCES

Health Sciences Center at Buffalo  
University Center  
Health Sciences Center at  
Stony Brook University Center  
Downstate Medical Center at  
Brooklyn  
Upstate Medical Center at  
Syracuse  
College of Optometry at New York  
City

## AGRICULTURAL AND TECHNICAL COLLEGES

College at Alfred  
College at Canton  
College at Cobleskill  
College at Delhi  
College at Farmingdale  
College at Morrisville

## COMMUNITY COLLEGES OF THE STATE UNIVERSITY OF NEW YORK

(Locally-sponsored, two-year colleges under the program of State University)

Adirondack Community College at Glens Falls  
 Broome Community College at Binghamton  
 Cayuga County Community College at Auburn  
 Clinton Community College at Plattsburgh  
 Columbia-Greene Community College at Hudson  
 Community College of the Finger Lakes at Canandaigua  
 Corning Community College at Corning  
 Dutchess Community College at Poughkeepsie  
 Erie Community College at Williamsville, Buffalo, Orchard Park  
 † Fashion Institute of Technology at New York City  
 Fulton-Montgomery Community College at Johnstown  
 Genesee Community College at Batavia  
 Herkimer County Community College at Herkimer  
 Hudson Valley Community College at Troy  
 Jamestown Community College at Jamestown  
 Jefferson Community College at Watertown  
 Mohawk Valley Community College at Utica  
 Monroe Community College at Rochester  
 Nassau Community College at Garden City  
 Niagara County Community College at Sanborn  
 North Country Community College at Saranac Lake  
 Onondaga Community College at Syracuse  
 Orange County Community College at Middletown  
 Rockland Community College at Suffern  
 Schenectady County Community College at Schenectady  
 Suffolk County Community College at Selden, Riverhead, Brentwood  
 Sullivan County Community College at Loch Sheldrake  
 Tompkins Cortland Community College at Dryden  
 Ulster County Community College at Stone Ridge  
 Westchester Community College at Valhalla

† While offering a limited number of baccalaureate degree programs, in addition to the associate degree, FIT is financed and administered in the manner provided for community colleges.

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## COLLEGE CALDENDAR FOR 1984-85

### FALL SEMESTER 1984

Registration.....	August 20-24 (Mon-Fri)
Last Day for New Registration.....	August 24 (Friday)
Classes Begin.....	August 27 (Monday)
Last Day to Add Courses.....	August 31 (Friday)
* Last Day for 100% Tuition/ Fee Refund.....	August 31 (Friday)
Labor Day (No classes).....	September 3 (Monday)
* Last Day for 50% Tuition/ Fee Refund.....	September 7 (Friday)
* Last Day for 25% Tuition/ Fee Refund.....	September 14 (Friday)
Fall Semester Break (No classes).....	October 8-9 (Mon-Tues)
Mid-Term Grades Due.....	October 24 (Wednesday)
Thanksgiving Recess (No classes).....	November 21-25 (Wed-Sun)
Last Day of Classes.....	December 17 (Monday)
Examination Period.....	December 18-20 (Tues-Thurs)
Grades Due.....	December 21 (Friday)

### SPRING SEMESTER 1985

Registration.....	January 14-18 (Mon-Fri)
Last Day for New Registration.....	January 18 (Friday)
Classes Begin.....	January 21 (Monday)
Last Day to Add Courses.....	January 25 (Friday)
* Last Day for 100% Tuition/ Fee Refund.....	January 25 (Friday)
* Last Day for 50% Tuition/ Fee Refund.....	February 1 (Friday)
* Last Day for 25% Tuition/ Fee Refund.....	February 8 (Friday)
Spring Semester Break (No classes).....	March 11-12 (Mon-Tues)
Mid-Term Grades Due.....	March 18 (Monday)
Easter Recess (No classes).....	April 8-13 (Mon-Sat)
Last Day of Classes.....	May 14 (Tuesday)
Examination Period.....	May 15-17 (Wed-Fri)
Grades Due.....	May 20 (Monday)
Graduation.....	May 31 (Friday)

\* Registrar's office must be notified by this date. Students in classes that meet only on Saturdays will have until 12 noon on the subsequent Monday to notify the Registrar's office on withdrawal and still qualify for the appropriate tuition/fee refund.



# MAP OF THE CAMPUS

## 1. TITCHENER HALL

Engineering Science and Physics  
Liberal Arts  
Mathematics  
Computer Studies

## 2. WALES BUILDING

Admissions Office  
Administrative Offices  
Alumni Association  
Center for Community Education  
Counseling and Student Development Center  
Educational Technology  
Finance Office  
Financial Aid  
BCC Foundation  
Health Service  
Registrar's Office  
Public Relations Office  
Student Affairs Office

## 3. SCIENCE BUILDING

Chemical Technology  
Dental Hygiene

## 4. ELECTRICAL BUILDING

Electrical Technology

## 5. STUDENT CENTER

Book Store  
Cafeteria  
Gymnasium  
Little Theater  
Physical Education

## 6. MAINTENANCE BUILDING

## 7. THE UNION

Housing  
Student Activities  
Student Lounge

## 8. MECHANICAL BUILDING

Civil Technology  
Mechanical Technology  
Special Career Programs

## 9. CECIL C. TYRRELL LEARNING RESOURCES CENTER

Audio-Visual  
Developmental Centers  
Mathematics  
Reading and Study Skills  
Writing  
Educational Opportunity Program  
Library  
Science Learning Center

## 10. BUSINESS BUILDING

Accounting and Business Administration  
Computer Center  
Marketing  
Medical Assistant  
Medical Record Technology  
Radiologic Technology  
Secretarial Sciences

## 11. FACULTY OFFICES

## 12. 901 FRONT STREET

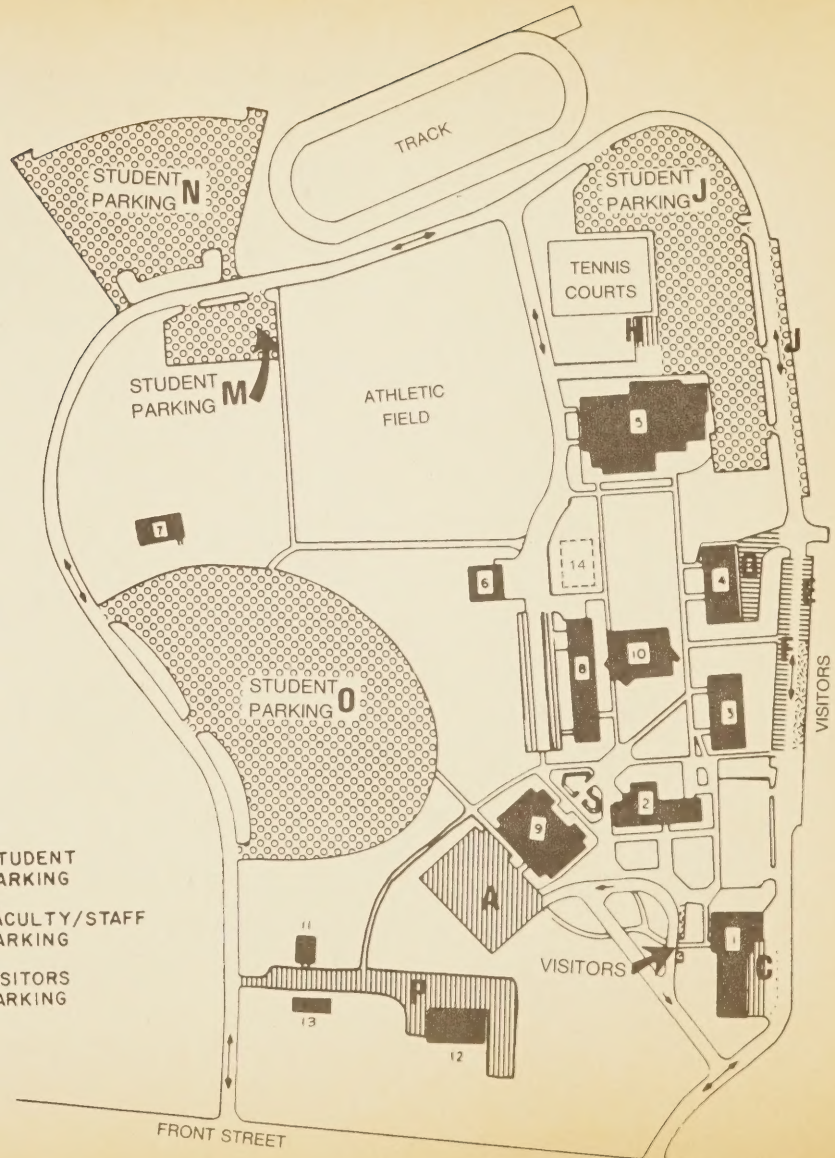
Biological Sciences  
Medical Laboratory Technology  
Nursing

## 13. "ALMS HOUSE" BUILDING

Art Studio

## 14. APPLIED TECHNOLOGY BLDG.

Under Construction



## NIMMONSBURG CENTER

Classes are also held at the Nimmonsburg Center, one mile north of the campus on Front Street.

